



February 26, 2020

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

Re: Status Report - Groundwater Monitoring Results  
Former Minocqua Cleaners State Lead Project, St. Germain St., Minocqua, WI  
WDNR BRRTs: 02-44-000052

Dear John:

This report presents the results of the October 2018, April 2019, and October 2019 semi-annual groundwater sampling at the former Minocqua Cleaners State Lead Project. The work was performed by MSA Professional Services, Inc. (MSA) for the Wisconsin Department of Natural Resources (WDNR) under Contract 37000-0000006751. This report was prepared under a change order to the original contract approved by DNR on January 21, 2020.

The semi-annual sampling was performed as described in MSA's Proposed Scope of Work for Budget Approval - 2018 and 2019, dated November 29, 2017. Groundwater samples were collected from 19 groundwater monitoring wells, Extraction Wells #4 and #6, the post-treatment discharge (labeled GW Outfall), and Municipal Well #3. The monitoring and municipal well locations are shown on attached Figures 2 and 3.

### **Extraction Well and Municipal Well Pumping Information**

MSA communicated with Lakeland Sanitary District staff to obtain municipal well pumping information. Well #3 has not been routinely used during the last several years and was more recently only turned on for sampling and quarterly testing. In 2019, Well #3 was pumped at approximately 600 gpm, with a total of 30,000 gallons pumped for the two sampling events (equivalent to approximately 50 minutes of total run time in 2019). Well #3 was 95 feet deep, and was screened from 47 to 87 feet. It was permanently abandoned as of January 8, 2020.

Municipal Well #4 is 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, screened from 69 to 89 feet.

Extraction well #4 pumps at a rate of approximately 65 gpm. Extraction well #6 pumps at a rate of approximately 15 gpm. Both extraction wells were in constant operation throughout this period.

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## **Groundwater Monitoring Results**

### ***Groundwater Flow Direction***

Table 1 presents a summary of groundwater elevation data collected since November 2004. Figure 4 shows the water table contours based on the October 2019 data. The groundwater flow direction at the water table was generally southeast from the source property toward Municipal Wells #3 and #4. An apparent cone of depression was observed in the elevation contours near extraction well EXW-6, located on the source property. This flow direction has been consistent throughout the project.

The groundwater flow direction in the deeper piezometer wells was also consistent during this period with previous directions, primarily to the southeast, although the elevations are variable and appear to be influenced by the pumping wells in the area.

### ***Monitoring Results***

Table 2 summarizes the groundwater sample results for this site from 1993 to October 2019. The analytical laboratory reports for the October 2018, and April and October 2019 sample rounds are attached. Graphs of concentrations versus time for wells B-13 and MW-19, the two wells with the highest concentrations, are also attached.

**Tetrachloroethene** (PCE) was detected above the NR 140 enforcement standard (ES) of 5 µg/L at water table wells **B-13** (ranging from 84 to 17 ug/L during this period) and in **MW-21** (7.5 to 5.4 ug/L). At B-13, PCE concentrations have steadily decreased from a high of 1,100 ug/L in 1998 to 17 ug/L as of October 2019. At MW-21, the PCE concentration decreased to below the ES with a concentration of 2.3 ug/L in the October 2019 sample. PCE was detected above the NR 140 Preventive Action Limit (PAL) of 0.5 µg/L at wells B-3A (<0.37 to 0.71 µg/L), B-13A (<0.37 to 0.94 ug/L), B-13B (1.2 to 2.6 ug/L), MW-17 (<0.37 to 0.97 ug/L), MW-18 (0.33 to 1.4 ug/L), MW-18A (<0.14 to 0.75 ug/L), MW-19 (1.3 to 2.6 ug/L), and MW-20 (3.6 to 4.6 ug/L) during this period.

**Trichloroethene** (TCE) was detected above the NR 140 enforcement standard (ES) of 5 µg/L at monitoring wells **B-13** (48 ug/L and 28 ug/L, decreasing to 3.8 ug/L in October 2019) and **MW-19** (<0.16 to 55 ug/L). PAL exceedances of TCE were detected at wells B-13B (<0.20 to 0.74 ug/L), MW-17 (0.26 to 0.71 ug/L), MW-18 (0.17 to 0.98 ug/L), MW-18A (0.63 to 0.85 ug/L), and MW-21A (2.3 to 3.5 ug/L) during this period.

**Vinyl chloride** was detected above the ES of 0.2 µg/L at wells **MW-17** (7.9 to 27 ug/L), **MW-18** (0.51 and 0.69 ug/L), **MW-19** (3.5 to 41 ug/L), and **MW-21A** (4.4 to 5.6 ug/L) in this report period. All of these wells are located on the source property.

In general, concentrations appear to be stable to decreasing across the site. The highest concentrations are present in the source property wells and immediately downgradient in wells near St. Germaine Street, as observed at water table well B-13. Concentrations are somewhat erratic at MW-19 and other wells located in the source area, and may reflect seasonal differences in water levels, precipitation and leaching through source area soils. Concentrations tend to be higher in the October sample event each year.

Figure 5 illustrates the cumulative CVOC concentrations in October 2019 (or last sample date at the well) across the subject area. Figure 5 also shows the individual CVOC constituents at the respective monitoring well.

### **Extraction Wells**

Extraction well EXW-6, located at the source area property, had an ES exceedance for PCE at 6.7 ug/L in October 2018. The PCE concentration decreased in the next two sample events to <0.37 ug/L, and then to 4.7 ug/L in October 2019. TCE exceeded the ES with a concentration of 8.7 ug/L in October 2019. Vinyl chloride was detected at 0.92 ug/L in October 2018, but not detected in the last two sample events during this reporting period. The cis-1,2-dichloroethylene (DCA) concentration ranged from <0.41 to 16 ug/L in October 2019, exceeding the PAL of 7 ug/L. The contaminant concentrations detected in extraction well EXW-6 appear to be stable to slowly decreasing since pumping began in December 2006.

Contaminant concentrations at EXW-4, the downgradient extraction well, remained below the ES during this period. PCE was detected at 0.22 ug/L in October 2018, but was not detected in the 2019 sampling. TCE concentrations ranged from 0.92 to 1.0 ug/L. Vinyl chloride has not been detected in the discharge from this well since November 2006.

### **Municipal Well #3 (LSD Well #3)**

No VOCs were detected in the three sample rounds collected during this period, and have not been detected since August 2006. This well has been permanently abandoned as of January 8, 2020.

### **Groundwater Discharge Sample (GW Outfall)**

No ES exceedances were detected in the discharge sample. Tetrachloroethene was detected at 0.34 ug/L in October 2018, but not in the two subsequent samples from 2019. TCE was detected during this period at concentrations ranging from 0.75 to 0.82 ug/L. Vinyl chloride has not been detected in the discharge sample. Cis-1,2-dichloroethene was detected at 1.4 to 1.6 ug/L during October 2018 to October 2019, and has usually been detected in the outfall sample.. The results of this sampling are also included in Table 2 (GW Outfall).

### **Summary**

The following was observed during this period.

- No VOCs have been detected in Municipal Well #3 since the August 2006 sample event. Municipal Well #3 was permanently abandoned in January 2020 and is no longer in use.
- Enforcement Standard (ES) exceedances remain in wells at the source property and immediately downgradient, but have greatly decreased since the original sampling events in 1993 to 1995.
- The highest concentrations of PCE and TCE remain at well MW-19 near the source area, and at B-13, which is located on the east side of St. Germaine Street and downgradient of the source area.
- High concentrations of vinyl chloride are present at MW-17 in the source area, but TCE and PCE concentrations are low to no detect in this well. The vinyl chloride concentration appears to be

decreasing in this well. Vinyl chloride is also present at higher concentrations at MW-19 in the source area, but exhibits a seasonally adjusted decreasing trend.

- There were no ES exceedances detected in pumped water at the downgradient extraction well EXW-4. The only PAL exceedance during this period in well EXW-4 was for TCE at 0.99 ug/L.
- Concentrations decreased at Extraction well EXW-6 during this period. The only ES exceedance in the October 2019 sample was for TCE at 8.7 ug/L. Although vinyl chloride was not detected in the 2019 sampling, it was detected above the ES in October 2018, and in many of the prior samples since the well began pumping in 2007.

### **Recommendations**

The long term monitoring results demonstrate the stable to decreasing trends across the area, and MSA believes the treatment system is achieving site remediation goals. The following recommendations for the site are presented.

#### **Extraction Well EXW-4**

Due to the abandonment of Municipal Well #3 in January 2020, MSA recommends that the DNR consider ceasing operation of extraction well EXW-4.

It is possible that the pumping at EXW-4 at 65 gpm may be contributing to the migration of contamination from the source area closer to Municipal Well #4. With the abandonment of Municipal Well #3, MSA believes the continued operation of EXW-6 in the source area may control the migration of the remaining contamination. With the scenario that includes extraction well EXW-4 no longer pumping, it may be more protective of Municipal Well #4 by not promoting contaminant plume migration to the southeast and towards Municipal Well #4. A potential negative impact of this proposed change would be the effect on treatment of the discharge from EXW-6 by the cascading weir system in order to meet water discharge standards. It is not known if the weir can adequately treat the water from EXW-6 due to the higher concentrations in the source area, and an alternative treatment (or re-starting EXW-4 to contribute water to the weir) may need to be evaluated. This recommendation is based on:

- Contaminant concentrations in this well are consistently below the NR 140 enforcement standard, and generally have been “no detect” to below the PAL for all compounds except TCE.
- Continued pumping at 65 gpm at well EXW-4 may influence migration to the southeast and toward Well #4. Prior to implementing this recommendation, MSA recommends further evaluation of the effect of ceasing pumping at EXW-4. This evaluation should consist of a plan to gather information following EXW-4 shutdown, and evaluate the effect during sampling and water level/flow direction in subsequent groundwater monitoring and sample events.

#### **Monitoring Program**

The current semi-annual groundwater monitoring frequency appears appropriate for the site, with a modified monitoring plan that should occur when EXW-4 is shut down. Based on specific well results and trends, sampling at some of the wells could be reduced to an annual frequency or eliminated. MSA recommends reviewing the need to sample wells B-1, B-1A, and B-1B as they no longer serve as sentinel wells for Municipal

Well #3. MSA recommends adding B-5 and B-9, a nested set of wells located just northwest of Municipal Well #4, if extraction well EXW-4 is shutdown. Well nest B-2,2A/2B has not been sampled since 2010. Due to changes in the flow regime with the permanent abandonment of Municipal Well #3, sampling of this well nest should be added to the sampling program to screen for the presence of contamination, and assess the discontinued pumping at EXW-4.

### Conclusions

MSA will prepare a scope of work to implement the recommendations for the site for WDNR review and consideration. It is anticipated the proposed sampling program will have semi-annual groundwater samples collected in April 2020, and we will forward the scope of work to you as soon as possible. Please contact Richard Lyster, project manager, at (608) 355-8901 if you have questions or comments concerning the report and to discuss an appropriate scope of work for the next contract period. Thank you for allowing MSA to assist the Department with this project.

Sincerely,

MSA Professional Services, Inc.



Jayne Englebert, P.G.  
Senior Hydrogeologist



Richard Lyster, P.G.  
Team Leader/Project Manager

cc: Cully Akey, Superintendent, Lakeland Sanitary District (email copy)

### List of Attachments

Table 1	Groundwater Elevations
Table 2	Groundwater Sample Analytical Results
Graph,	concentrations vs. time, well B-13
Graph,	concentrations vs. time, well MW-19
Figure 1	Site Location Map
Figure 2	Site Layout Map
Figure 3	Well Location Map
Figure 4	Groundwater Flow Direction, October 2019
Figure 5	Groundwater Concentrations
	Analytical Reports for groundwater sampling

Table 1 - Groundwater Elevations, Minocqua Cleaners, Minocqua, WI

Well Number Screen Length Ground Surface Top of Casing Top of Screen DATE	B-1		B-1A		B-1B		B-2		B-2A		B-2B		B-3		B-3A	
	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
09-Nov-04	29.52	1576.96	26.11	1580.55	26.13	1580.79	23.42	1580.58	22.82	1580.70	22.25	1581.43	22.49	1582.67	22.71	1582.71
06-Dec-04	29.71	1576.77	26.39	1580.27	26.40	1580.52	23.78	1580.22	23.16	1580.36	22.28	1581.40	22.81	1582.35	22.92	1582.50
22-Mar-05	25.57	1580.91	25.61	1581.05	25.86	1581.06	23.61	1580.39	23.20	1580.32	22.81	1580.87	23.81	1581.35	23.88	1581.54
31-Aug-05	25.63	1580.85	25.68	1580.98	25.94	1580.98	23.61	1580.39	23.22	1580.30	22.83	1580.85	23.21	1581.95	23.62	1581.80
14-Feb-06	25.68	1580.80	25.70	1580.96	25.98	1580.94	23.61	1580.39	23.18	1580.34	22.85	1580.83	23.32	1581.84	23.68	1581.74
22-May-06	25.40	1581.08	25.41	1581.25	25.64	1581.28	23.56	1580.44	23.04	1580.48	22.47	1581.21	22.96	1582.20	23.31	1582.11
08-Aug-06	31.61	1574.87	27.95	1578.71	26.89	1580.03	25.74	1578.26	24.97	1578.55	23.89	1579.79	23.71	1581.45	23.89	1581.53
29-Nov-06	25.60	1580.88	26.21	1580.45	26.68	1580.24	25.21	1578.79	24.46	1579.06	23.05	1580.63	23.51	1581.65	23.62	1581.80
26-Feb-07	25.01	1581.47	25.47	1581.19	25.89	1581.03	22.95	1581.05	22.31	1581.21	22.64	1581.04	22.92	1582.24	23.11	1582.31
22-May-07	24.97	1581.51	25.01	1581.65	25.29	1581.63	23.33	1580.67	22.28	1581.24	22.22	1581.46	22.47	1582.69	22.87	1582.55
21-Aug-07	31.29	1575.19	27.36	1579.30	27.26	1579.66	25.33	1578.67	24.59	1578.93	23.31	1580.37	23.49	1581.67	23.66	1581.76
28-Nov-07	24.50	1581.98	24.66	1582.00	24.94	1581.98	22.52	1581.48	21.90	1581.62	21.91	1581.77	22.81	1582.35	22.97	1582.45
28-Jul-08	25.65	1580.83	25.73	1580.93	26.02	1580.90	24.09	1579.91	23.58	1579.94	23.19	1580.49	23.24	1581.92	23.61	1581.81
20-Nov-08	24.90	1581.58	25.07	1581.59	25.34	1581.58	23.02	1580.98	22.33	1581.19	22.37	1581.31	23.28	1581.88	23.49	1581.93
10-Feb-09	25.35	1581.13	25.53	1581.13	25.82	1581.10	23.40	1580.60	22.81	1580.71	22.86	1580.82	23.26	1581.90	23.70	1581.72
20-May-09	25.14	1581.34	25.16	1581.50	25.40	1581.52	23.48	1580.52	22.98	1580.54	22.39	1581.29	22.23	1582.93	23.14	1582.28
05-Aug-09	25.86	1580.62	25.94	1580.72	26.21	1580.71	23.38	1580.62	23.74	1579.78	23.30	1580.38	23.50	1581.66	23.84	1581.58
19-Nov-09	25.21	1581.27	25.19	1581.47	25.43	1581.49	23.36	1580.64	22.84	1580.68	22.23	1581.45	22.84	1582.32	23.21	1582.21
25-Feb-10	25.10	1581.38	25.07	1581.59	25.32	1581.60	22.61	1581.39	22.01	1581.51	22.11	1581.57	22.93	1582.23	23.26	1582.16
11-May-10	24.85	1581.63	25.19	1581.47	25.53	1581.39	22.79	1581.21	22.17	1581.35	22.40	1581.28	22.75	1582.41	23.09	1582.33
25-Oct-10	23.66	1582.82	23.82	1582.84	24.06	1582.86							21.74	1583.42	22.06	1583.36
26-Apr-11	24.27	1582.21	24.47	1582.19	24.74	1582.18	22.13	1581.87	21.54	1581.98	21.56	1582.12	22.45	1582.71	22.78	1582.64
27-Oct-11	24.06	1582.42	24.23	1582.43	24.49	1582.43	22.46	1581.54	21.94	1581.58	21.25	1582.43	22.18	1582.98	22.50	1582.92
26-Apr-12	23.87	1582.61	24.02	1582.64	24.28	1582.64	21.71	1582.29	21.11	1582.41	21.13	1582.55	22.07	1583.09	22.37	1583.05
08-Jan-14	24.08	1582.40	24.09	1582.57	24.32	1582.60	21.68	1582.32	21.11	1582.41	21.21	1582.47	21.98	1583.18	22.27	1583.15
26-Apr-14	24.56	1581.92	24.82	1581.84	25.09	1581.83	22.71	1581.29	22.20	1581.32	21.81	1581.87	22.41	1582.75	22.74	1582.68
28-Oct-14	23.32	1583.16	23.46	1583.20	23.73	1583.19	21.68	1582.32	21.17	1582.35	20.42	1583.26	21.54	1583.62	21.79	1583.63
27-Apr-15	23.98	1582.50	24.16	1582.50	24.43	1582.49	21.70	1582.30	21.14	1582.38	21.12	1582.56	22.11	1583.05	22.36	1583.06
20-Oct-15	23.77	1582.71	23.74	1582.92	23.99	1582.93	21.46	1582.54	20.89	1582.63	20.97	1582.71	21.71	1583.45	22.02	1583.40
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

Table 1 - Groundwater Elevations, Minocqua Cleaners, Minocqua, WI

Well Number	B-5		B-8		B-8A		B-9		B-10		B-11		B-12	
Screen Length	15		10		5		5		5		10		25	
Ground Surface	1597.2		1602.06		1600.86		1596.69		1600.29		1600.56		1604.38	
Top of Casing	1599.02		1602.86		1603.37		1598.47		1601.25		1601.44		1604	
Top of Screen	1588.21		1577.06				1546		1554.5		1575.06		1589.1	
DATE	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
09-Nov-04	16.94	1582.08	20.40	1582.46			16.34	1582.13	19.08	1582.17	19.22	1582.22	21.98	1582.02
06-Dec-04	17.08	1581.94	20.48	1582.38	22.35	1581.02	16.64	1581.83	19.11	1582.14	19.15	1582.29	21.81	1582.19
23-Mar-05			21.43	1581.43	22.29	1581.08								
31-Aug-05			21.77	1581.09	22.37	1581.00								
14-Feb-06			21.30	1581.56	22.44	1580.93								
22-May-06			20.59	1582.27	22.22	1581.15								
08-Aug-06			21.93	1580.93	24.23	1579.14								
29-Nov-06	17.97	1581.05	21.55	1581.31	22.47	1580.90	17.54	1580.93						
26-Feb-07	17.61	1581.41	21.27	1581.59	22.01	1581.36	16.88	1581.59						
22-May-07	17.30	1581.72	20.83	1582.03	21.71	1581.66	16.57	1581.90						
21-Aug-07	18.32	1580.70	21.74	1581.12	23.68	1579.69	17.83	1580.64						
28-Nov-07	17.40	1581.62	20.59	1582.27	22.47	1580.90	16.69	1581.78						
28-Jul-08	19.41	1579.61	21.18	1581.68	22.41	1580.96	19.59	1578.88	20.33	1580.92	20.38	1581.06		
19-Nov-08			21.11	1581.75	21.81	1581.56	17.40	1581.07	19.76	1581.49	19.98	1581.46		
10-Feb-09	18.91	1580.11	21.53	1581.33	22.27	1581.10	17.74	1580.73	19.89	1581.36	20.02	1581.42		
20-May-09	17.73	1581.29	20.31	1582.55	21.72	1581.65	17.33	1581.14	19.84	1581.41	19.87	1581.57		
05-Aug-09	19.73	1579.29	21.73	1581.13	22.37	1581.00	17.82	1580.65	20.09	1581.16	20.44	1581.00		
19-Nov-09	18.07	1580.95	21.04	1581.82	21.92	1581.45	18.70	1579.77	20.11	1581.14	20.05	1581.39	22.82	1581.18
25-Feb-10	17.68	1581.34	21.05	1581.81	21.83	1581.54	18.41	1580.06	19.51	1581.74	19.76	1581.68	22.44	1581.56
11-May-10	17.49	1581.53	20.84	1582.02	21.77	1581.60	16.81	1581.66	19.61	1581.64	19.64	1581.80	22.41	1581.59
25-Oct-10									18.89	1582.36	18.83	1582.61	21.34	1582.66
26-Apr-11	16.84	1582.18			21.12	1582.25	16.28	1582.19	19.38	1581.87	19.29	1582.15	21.86	1582.14
27-Oct-11	16.77	1582.25			20.84	1582.53	16.73	1581.74	18.77	1582.48	19.01	1582.43	21.68	1582.32
26-Apr-12	16.46	1582.56			20.70	1582.67	15.88	1582.59	18.96	1582.29	18.88	1582.56	21.47	1582.53
08-Jan-14	16.52	1582.50	19.88	1582.98	20.72	1582.65	15.92	1582.55	19.01	1582.24	19.03	1582.41	21.73	1582.27
26-Apr-14	17.66	1581.36	20.57	1582.29	21.29	1582.08	17.37	1581.10	19.61	1581.64	19.58	1581.86	22.28	1581.72
28-Oct-14	16.56	1582.46	19.27	1583.59	20.12	1583.25	16.63	1581.84	18.07	1583.18	18.29	1583.15	20.92	1583.08
27-Apr-15	16.54	1582.48	19.47	1583.39	20.70	1582.67	15.98	1582.49	18.73	1582.52	18.94	1582.50	21.60	1582.40
20-Oct-15	16.51	1582.51	19.84	1583.02	20.47	1582.90	15.81	1582.66	18.71	1582.54	18.72	1582.72	21.35	1582.65
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	21.24	1582.76
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	21.03	1582.97
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	20.59	1583.41
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	21.31	1582.69
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	22.04	1581.96
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	21.11	1582.89
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	21.71	1582.29
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	21.04	1582.96

Table 1 - Groundwater Elevations, Minocqua Cleaners, Minocqua, WI

Well Number	B-13		B-13A		B-13B		B-15		MW-17		MW-18		MW-18A	
Screen Length	25		5		5		25		10		10		5	
Ground Surface	1594.58		1593.91		1594.1		1598.85		1591.1		1590.9		1589.48	
Top of Casing	1596.7		1596.33		1596.16		1601.77		1591.8		1591.42		1591.6	
Top of Screen	1585.1		1538.9		1509.1		1583.35		1586.1		1585.9		1535.7	
DATE	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
09-Nov-04	13.18	1583.52					18.36	1583.41	8.35	1583.45	8.14	1583.28		
06-Dec-04	13.28	1583.42	14.11	1582.22	13.68	1582.48	18.41	1583.36	8.69	1583.11	8.46	1582.96		
23-Mar-05	14.24	1582.46	15.08	1581.25	14.92	1581.24			9.63	1582.17	9.50	1581.92		
31-Aug-05	14.17	1582.53	14.77	1581.56	14.48	1581.68			9.49	1582.31	9.29	1582.13		
15-Feb-06	14.25	1582.45	14.90	1581.43	14.65	1581.51			9.68	1582.12	9.54	1581.88		
26-May-06	13.84	1582.86	14.50	1581.83	14.23	1581.93			9.05	1582.75	8.95	1582.47		
08-Aug-06	14.12	1582.58	14.73	1581.60	14.42	1581.74			9.00	1582.80	8.98	1582.44		
29-Nov-06	13.93	1582.77	14.76	1581.57	14.51	1581.65			9.26	1582.54	8.97	1582.45		
26-Feb-07	13.54	1583.16	14.14	1582.19	13.79	1582.37			8.98	1582.82	8.82	1582.60		
23-May-07	13.50	1583.20	14.08	1582.25	13.72	1582.44			8.69	1583.11	8.52	1582.90		
22-Aug-07	14.08	1582.62	14.66	1581.67	14.28	1581.88			9.24	1582.56	9.07	1582.35		
28-Nov-07	13.58	1583.12	14.20	1582.13	13.89	1582.27			8.91	1582.89	8.80	1582.62		
29-Jul-08	14.11	1582.59	14.72	1581.61	14.37	1581.79			8.98	1582.82	8.89	1582.53		
15-Aug-08									9.20	1582.60	9.12	1582.30		
11-Sep-08	14.12	1582.58	14.78	1581.55					9.35	1582.45	9.19	1582.23		
9-Oct-08	13.75	1582.95	14.48	1581.85					9.09	1582.71	8.96	1582.46		
21-Nov-08	13.80	1582.90	14.56	1581.77	14.17	1581.99			9.21	1582.59	9.17	1582.25		
16-Dec-08	13.81	1582.89	14.49	1581.84					9.41	1582.39	9.26	1582.16		
10-Feb-09	14.27	1582.43	14.94	1581.39	14.65	1581.51			9.39	1582.41	9.56	1581.86		
20-May-09	13.77	1582.93	14.24	1582.09	14.20	1581.96			8.83	1582.97	8.81	1582.61		
05-Aug-09	14.41	1582.29	15.01	1581.32	14.48	1581.68			9.54	1582.26	9.33	1582.09		
19-Nov-09	13.81	1582.89	14.41	1581.92	14.11	1582.05			9.13	1582.67	9.04	1582.38		
25-Feb-10	13.72	1582.98	14.37	1581.96	14.15	1582.01			9.35	1582.45	9.15	1582.27		
11-May-10	13.68	1583.02	14.34	1581.99	14.07	1582.09			9.13	1582.67	9.02	1582.40		
25-Oct-10	12.51	1584.19	13.54	1582.79	13.34	1582.82			8.37	1583.43	8.13	1583.29		
26-Apr-11	13.24	1583.46	14.02	1582.31	13.74	1582.42			8.75	1583.05	8.73	1582.69		
27-Oct-11	13.08	1583.62	13.86	1582.47	13.64	1582.52			8.80	1583.00	8.54	1582.88		
26-Apr-12	12.97	1583.73	13.70	1582.63	13.46	1582.70			8.73	1583.07	8.52	1582.90		
08-Jan-14	12.84	1583.86	13.65	1582.68	13.46	1582.70			8.61	1583.19	8.34	1583.08		
26-Apr-14	13.15	1583.55	13.99	1582.34	13.73	1582.43			8.38	1583.42	8.56	1582.86		
28-Oct-14	12.34	1584.36	13.23	1583.10	13.09	1583.07			8.18	1583.62	7.92	1583.50		
27-Apr-15	12.88	1583.82	13.60	1582.73	13.38	1582.78			8.69	1583.11	8.54	1582.88		
20-Oct-15	12.62	1584.08	13.35	1582.98	13.12	1583.04			8.51	1583.29	8.24	1583.18		
25-May-16	12.41	1584.29	13.14	1583.19	12.93	1583.23			8.41	1583.39	8.04	1583.38	8.28	1583.32
16-Nov-16	12.48	1584.22	13.15	1583.18	12.92	1583.24			8.37	1583.43	8.09	1583.33	8.34	1583.26
27-Apr-17	12.01	1584.69	12.82	1583.51	12.63	1583.53			7.99	1583.81	7.80	1583.62	8.08	1583.52
30-Oct-17	12.48	1584.22	13.19	1583.14	12.95	1583.21			8.17	1583.63	7.99	1583.43	8.31	1583.29
26-Apr-18	13.16	1583.54	14.01	1582.32	13.78	1582.38			7.83	1583.97	8.49	1582.93	9.07	1582.53
29-Oct-18	12.47	1584.23	13.21	1583.12	12.96	1583.20			8.35	1583.45	8.06	1583.36	8.38	1583.22
08-Apr-19	12.80	1583.90	13.67	1582.66	13.45	1582.71			8.26	1583.54	8.43	1582.99	8.84	1582.76
28-Oct-19	12.39	1584.31	13.11	1583.22	12.91	1583.25			8.21	1583.59	7.98	1583.44	8.29	1583.31



Table 1 - Groundwater Elevations, Minocqua Cleaners, Minocqua, WI

Well Number	MW-19		MW-19A		MW-20		MW-21		MW-21A	
Screen Length	10		5		10		10		5	
Ground Surface	1591.3		1589.8		1590.92		1591.99		1592.16	
Top of Casing	1591.73		1592.04		1593.78		1591.51		1592.66	
Top of Screen	1586.3		1535.1		1587.3		1586		1554.2	
DATE	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
09-Nov-04	8.47	1583.26								
06-Dec-04	8.84	1582.89								
23-Mar-05	9.88	1581.85								
31-Aug-05	9.53	1582.20								
15-Feb-06	9.88	1581.85								
26-May-06	9.30	1582.43								
08-Aug-06	9.26	1582.47								
29-Nov-06	9.28	1582.45								
26-Feb-07	8.96	1582.77								
23-May-07	8.72	1583.01								
22-Aug-07	9.21	1582.52								
28-Nov-07	9.04	1582.69								
29-Jul-08	9.04	1582.69			9.68	1584.10	10.81	1580.70	13.43	1579.23
15-Aug-08	9.25	1582.48			9.89	1583.89	10.97	1580.54	13.62	1579.04
11-Sep-08	9.33	1582.40			10.01	1583.77	10.90	1580.61	13.53	1579.13
9-Oct-08	9.16	1582.57			9.88	1583.90	10.61	1580.90	13.42	1579.24
21-Nov-08	9.39	1582.34			10.13	1583.65	10.71	1580.80	16.37	1576.29
16-Dec-08	9.45	1582.28			10.20	1583.58	10.76	1580.75	13.22	1579.44
10-Feb-09	9.86	1581.87			10.61	1583.17	11.07	1580.44	13.58	1579.08
20-May-09	9.07	1582.66			9.84	1583.94	10.11	1581.40	12.91	1579.75
05-Aug-09	9.46	1582.27			10.14	1583.64	10.52	1580.99	13.17	1579.49
19-Nov-09	9.28	1582.45			10.00	1583.78	10.17	1581.34	14.35	1578.31
25-Feb-10	9.38	1582.35			10.15	1583.63	10.16	1581.35	13.85	1578.81
11-May-10	9.25	1582.48			10.02	1583.76	10.01	1581.50	12.61	1580.05
25-Oct-10	8.41	1583.32			9.18	1584.60	9.14	1582.37	11.66	1581.00
26-Apr-11	9.07	1582.66			9.86	1583.92	9.74	1581.77	10.42	1582.24
27-Oct-11	8.81	1582.92			9.58	1584.20	9.42	1582.09	13.16	1579.50
26-Apr-12	8.84	1582.89			9.62	1584.16	9.29	1582.22	15.24	1577.42
08-Jan-14	8.63	1583.10			9.43	1584.35	8.68	1582.83	11.23	1581.43
26-Apr-14	9.09	1582.64			9.93	1583.85	8.52	1582.99	11.68	1580.98
28-Oct-14	8.22	1583.51			9.06	1584.72	7.95	1583.56	10.51	1582.15
27-Apr-15	8.84	1582.89			9.68	1584.10	8.80	1582.71	11.54	1581.12
20-Oct-15	8.49	1583.24			9.28	1584.50	8.54	1582.97	10.73	1581.93
25-May-16	8.33	1583.40	8.67	1583.37	9.26	1584.52	7.09	1584.42	10.96	1581.70
16-Nov-16	8.34	1583.39	8.64	1583.40	9.19	1584.59	8.49	1583.02	11.19	1581.47
27-Apr-17	8.11	1583.62	8.44	1583.60	9.04	1584.74	7.32	1584.19	13.11	1579.55
30-Oct-17	8.29	1583.44	8.59	1583.45	9.16	1584.62	8.08	1583.43	12.32	1580.34
26-Apr-18	8.97	1582.76	9.61	1582.43	9.96	1583.82	8.85	1582.66	11.47	1581.19
29-Oct-18	8.34	1583.39	8.64	1583.40	9.20	1584.58	8.37	1583.14	14.19	1578.47
08-Apr-19	8.73	1583.00	9.34	1582.70	9.74	1584.04	8.38	1583.13	12.16	1580.50
28-Oct-19	8.28	1583.45	8.60	1583.44	9.16	1584.62	8.03	1583.48	11.19	1581.47

**Table 1 - Groundwater Elevations, Minocqua Cleaners, Minocqua, WI**

Note :

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.

**TABLE 2**  
**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>B-1</b> (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	173	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	
Top of Casing Elevation = 1606.66 ft MSL											
<b>B-1A</b> (60')	12/06/04	<0.5	<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	

**TABLE 2**  
**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>B-1B</b> (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	
Top of Casing Elevation = 1604.00 ft MSL												
<b>B-2</b> (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	
Top of Casing Elevation = 1603.52 ft MSL												
<b>B-2A</b> (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	

TABLE 2  
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	
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
dupl	08/08/06	0.42	<0.4	0.32	<0.15	<0.15	1581.45	8.03	0.94	334	223
	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	15.83.07	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
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	61	2.1	11	30	8.3	1581.80	6.94	1.68	257	250.8
dupl	02/15/06	39	2.9	6.1	16	4.8	1581.74	7.68	1.61	158	254.3
	05/23/06	14	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	15	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	0.61	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
	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

continued on next page

**TABLE 2**  
**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>B-3A</b>	01/09/14	continued from previous page									
	04/10/14	<0.12	<0.25	0.64	<0.19	<0.10	1583.15	6.88	2.38	228	409
	10/29/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.68	6.91	2.28		422
	04/28/15	<0.12	<0.25	0.55	<0.19	<0.10	1583.63	6.79	1.31		341
	10/21/15	<0.41	<0.35	0.89	<0.19	<0.10	1583.06	6.62	2.46		375
	05/26/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.40	7.68	2.06	386	326
	11/17/16	<0.41	<0.35	0.66	0.46	<0.20	1583.53	7.66	2.37	430	382
	04/28/17	<0.41	<0.35	1.2	0.42	<0.20	1583.54	8.12	2.49	345	355
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.91	8.00	2.02	363	354
	04/27/18	<0.41	<0.35	0.64	<0.16	<0.20	1583.49	7.47	2.16	320	353
	10/30/18	<0.21	<0.23	0.71	0.25	<0.20	1582.68	7.26	2.13	298	348
	04/09/19	<0.41	<0.35	0.50 J	<0.20	<0.18	1583.48	6.99	2.65	419	367
	10/29/19	<0.41	<0.35	0.71 J	<0.16	<0.20	1583.05	6.82	4.27	331	361
		<0.41	<0.35	<0.37	<0.16	<0.20	1583.57	6.90	2.87	303	395
<b>B-5</b> (20')	12/06/04	Top of Casing Elevation = 1599.02 ft MSL									
		<0.5	<0.4	<0.5	<0.6	<0.3	1583.16	8.06	1.23	177	235.8
<b>B-8</b> (30')	12/06/04	Top of Casing Elevation = 1602.86 ft MSL									
	03/22/05	<0.5	<0.4	<0.5	<0.6	<0.3	1582.38	8.20	0.86	-36	642.1
	08/31/05	<0.60	<0.60	<0.4	<0.15	<0.12	1581.43	8.17	1.37	-36	631.6
	02/14/06	<0.60	<0.60	<0.4	<0.15	<0.12	1581.09	6.52	1.55	137	472.8
	05/22/06	<0.4	<0.4	<0.4	<0.15	<0.12	1581.56	6.89	1.48	145	566.4
	08/08/06	<0.4	<0.4	<0.29	<0.15	<0.15	1582.27	7.13	1.32	142	570.5
	11/29/06	<0.4	<0.4	<0.29	<0.15	<0.15	1580.93	8.29	1.25	180	663
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15	1581.31	7.17	1.43		430
	05/22/07	<0.4	<0.5	<0.29	<0.15	<0.15	1581.59	7.29	1.15	104	657
	08/21/07	<0.4	<0.5	<0.4	<0.15	<0.15	1582.03	7.61	1.89		579
	11/28/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.12	6.07	1.36	174	700
	07/28/08	<0.4	<0.5	<0.4	<0.15	<0.15	1582.27	6.44	1.93	176	755
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.68	6.46	1.98	147	725
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.33	6.74	2.08	123	778
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15	1582.55	7.42	2.49	201	7.13
	05/11/10	<0.25	<0.25	<0.4	<0.15	<0.15	1581.81	6.60	1.02	120	838
		<0.25	<0.25	<0.3	<0.21	<0.22	1582.02	6.87	1.73	131	785
<b>B-8A</b> (62')	12/06/04	Top of Casing Elevation = 1603.37 ft MSL									
	03/22/05	<0.5	<0.4	<0.5	<0.6	<0.3	1581.02	8.83	1.32	117	444.5
	08/31/05	<0.60	<0.60	<0.4	<0.15	<0.12	1581.08	8.88	1.44	-56	394.1
	02/14/06	<0.60	<0.60	<0.4	<0.15	<0.12	1581.00	7.22	1.98	109	271.5
	05/22/06	<0.4	<0.4	<0.4	0.34	<0.12	1580.93	7.56	1.95	163	269.3
	08/08/06	<0.4	<0.4	<0.29	0.33	<0.15	1581.15	7.65	2.06	154	286.6
	11/29/06	<0.4	<0.4	<0.29	<0.15	<0.15	1579.14	8.35	1.37	234	332
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15	1580.90	7.58	1.34		302
	05/22/07	<0.4	<0.4	<0.29	<0.15	<0.15	1581.36	7.21	1.03	351	422
	08/21/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.66	7.66	1.25		447
	11/28/07	<0.4	<0.5	<0.4	<0.15	<0.15	1579.69	6.02	0.82	439	523
	07/28/08	<0.4	<0.5	<0.4	<0.15	<0.15	1580.90	7.08	1.50	375	541
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1580.96	7.30	1.57	305	488
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.10	7.21	1.61	327	436
	11/19/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.65	6.93	1.68	349	440
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15	1581.45	7.17	1.94	367	476
		<0.4	<0.5	<0.4	<0.15	<0.15	1581.54	7.72	1.98	263	462
<b>B-9</b> (62')	12/06/04	Top of Casing Elevation = 1598.47 ft MSL									
	11/29/06	<0.5	<0.4	<0.5	<0.6	<0.3	1586.41	8.42	1.04	165	158.9
	02/26/07	<0.4	<0.4	<0.29	<0.15	<0.15	1585.51	7.51	1.12		191
	05/22/07	<0.4	<0.4	<0.29	<0.15	<0.15	1586.17	7.61	1.74	410	206
	08/21/07	<0.4	<0.5	<0.4	<0.15	<0.15	1596.48	7.58	1.21		358
	11/28/07	<0.4	<0.5	<0.4	<0.15	<0.15	1585.22	6.50	2.30	376	186
	07/28/08	<0.4	<0.5	<0.4	<0.15	<0.15	1586.36	6.54	1.23	392	353
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1578.88	6.88	2.18	291	318
	02/25/10	<0.4	<0.5	<0.4	<0.15	<0.15	1580.73	6.06	1.62	358	488
		<0.4	<0.5	<0.4	<0.15	<0.15	1580.06	7.90	1.72	244	305
<b>B-10</b> (52')	12/07/04	Top of Casing Elevation = 1601.25 ft MSL									
	10/25/10	<0.5	<0.4	<0.5	<0.6	<0.3	1582.14	9.36	1.03	123	166
	04/26/11	<0.5	<0.5	<0.5	<0.2	<0.2	1582.36	7.90	1.27	230	209
	10/27/11	<0.50	<0.50	<0.5	<0.20	<0.20	1581.87	8.27	2.41	263	204
	04/27/12	<0.12	<0.25	<0.50	<0.20	<0.20	1582.48	6.95	1.56	257	228
	01/08/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.29	6.98	2.13	249	217
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.24	7.09	1.97	289	351
	10/28/14	<0.12	<0.25	<0.17	<0.19	<0.10	1581.64	6.73	2.35		313
	04/27/15	<0.12	<0.25	<0.17	<0.19	<0.10	1583.18	7.54	0.97		308
	10/20/15	<0.41	<0.35	<0.17	<0.19	<0.10	1582.52	6.70	2.28		212
	05/25/16	<0.41	<0.35	<0.37	<0.16	<0.20	1582.54	7.45	1.26	353	214
	11/16/16	<0.41	<0.35	<0.37	<0.16	<0.20	1582.88	7.70	1.79	417	214
	04/27/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.07	8.16	1.92	344	215
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.21	8.18	2.24	392	217
	04/26/18	<0.41	<0.35	<0.37	<0.16	<0.20	1582.75	7.84	2.32	380	218
	10/30/18	<0.21	<0.23	<0.37	<0.16	<0.20	1582.11	7.07	2.15	243	215
	04/08/19	<0.41	<0.35	<0.14	<0.20	<0.18	1583.00	7.07	2.11	420	214
	10/28/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.18	7.05	2.63	325	204
		<0.41	<0.35	<0.37	<0.16	<0.20	1583.08	7.18	2.51	295	206

**TABLE 2**  
**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 = 1601.44 ft MSL											
<b>B-11</b> (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	308
	04/26/11	<0.5	<0.5	<0.5	<0.20	<0.20	1582.15	8.04	2.50	214	241
	10/27/11	<0.50	<0.50	<0.50	<0.20	<0.20	1582.43	6.93	2.00	225	256
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10	1582.56	7.00	2.08	227	252
	01/08/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.41	6.91	2.37	271	346
	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	251
	05/25/16	<0.41	<0.35	<0.37	<0.16	<0.20	1582.85	7.26	2.19	441	251
	11/16/16	<0.41	<0.35	<0.37	<0.16	<0.20	1583.05	7.85	2.54	270	246
	04/27/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.40	7.92	2.07	371	265
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1582.80	7.40	1.74	382	250
	04/26/18	<0.41	<0.35	<0.37	<0.16	<0.20	1582.12	6.94	2.31	266	249
10/30/18	<0.21	<0.23	<0.14	<0.20	<0.18	1582.98	7.06	2.31	377	268	
04/08/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.36	6.99	4.56	338	262	
10/28/19	<0.41	<0.35	<0.37	<0.16	<0.20	1583.07	7.16	2.50	306	282	
Top of Casing Elevation = 1604.00 ft MSL											
<b>B-12</b> (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	217
	04/26/11	<0.5	<0.5	<0.5	<0.20	<0.20	1582.14	8.11	2.55	300	208
	10/27/11	<0.50	<0.50	<0.50	<0.20	<0.20	1582.32	6.99	1.64	287	211
	04/27/12	<0.12	<0.25	<0.17	<0.19	<0.10	1582.53	7.03	1.95	294	215
	01/08/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.27	7.14	1.88	300	297
	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	225
	05/24/16	3.0	<0.35	<0.37	0.74	<0.20	1582.76	7.33	1.94	442	254
	11/16/16	1.8	<0.35	<0.37	0.47	<0.20	1582.17	7.99	2.85	361	237
	duplicate 04/27/17	17	<0.35	<0.37	9.0	<0.20	1583.41	7.77	2.27	430	289
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1582.69	7.40	2.30	373	209
	04/26/18	<0.41	<0.35	<0.37	<0.16	<0.20	1581.96	7.13	2.17	247	207
10/30/18	<0.21	<0.23	<0.14	<0.20	<0.18	1582.89	7.14	2.88	429	211	
04/08/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.29	7.07	2.53	329	207	
10/28/19	<0.41	<0.35	<0.37	<0.16	<0.20	1582.96	7.24	2.58	289	214	
Top of Casing Elevation = 1596.70 ft MSL											
<b>B-13</b> (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
	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		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
	Qtr 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
	Qtr 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
	Qtr 02/11/09	0.58	<0.5	37	1.6	<0.15	1582.43	7.53	1.49	414	297
	Qtr 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
	Qtr 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

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TABLE 2  
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>B-13</b>	10/28/11	continued from previous page									
	04/27/12	240	2.7	150	130	0.94	1583.62	7.28	1.72	165	593
	01/09/14	18	<0.25	24	11	1.1	1583.73	7.25	1.58	172	601
	04/10/14	65	0.57	35	26	11	1583.86	7.22	1.96	181	611
	10/29/14	63	<0.25	22	12	5.7	1583.55	7.02	2.46		580
	04/28/15	210	2.2	100	100	48	1584.36	6.43	0.97		396
	10/21/15	19	<0.25	57	24	1.9	1583.82	6.67	2.07		336
	05/26/16	41	<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
<b>B-13A</b> (62')	12/08/04	Top of Casing Elevation = 1596.33 ft MSL									
	03/23/05	1.5	<0.4	<0.5	<0.6	<0.3	1582.22	9.12	1.45	64	2.46.4
	09/01/05	0.95	<0.6	<0.4	<0.15	<0.12	1581.25	9.38	1.36	141	191.5
	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	290	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
<b>B-13B</b> (92')	12/08/04	Top of Casing Elevation = 1596.16 ft MSL									
	03/23/05	0.92	<0.4	<0.5	<0.6	<0.3	1582.48	9.34	1.25	44	497.8
	09/01/05	<0.6	<0.6	<0.4	<0.15	<0.12	1581.24	8.40	1.77	173	197.8
	02/15/06	<0.6	<0.6	<0.4	<0.15	<0.12	1581.68	7.57	1.41	253	144
	05/23/06	<0.4	<0.4	<0.29	<0.15	<0.15	1581.51	8.18	1.30	156	151.9
	08/08/06	<0.4	<0.4	<0.29	<0.15	<0.15	1581.93	8.10	1.13	153	144.9
	11/29/06	<0.4	<0.4	0.32	<0.15	<0.15	1581.74	7.83	0.74	326	168
	02/26/07	<0.4	<0.4	0.32	<0.15	<0.15	1581.65	7.32	1.25		159
	05/22/07	<0.4	<0.4	<0.29	<0.15	<0.15	1582.37	7.58	1.72	349	172
	08/22/07	<0.4	<0.5	<0.4	<0.15	<0.15	1582.44	7.27	1.33		191
	11/29/07	<0.4	<0.5	<0.4	<0.15	<0.15	1581.88	5.89	2.04	370	205
	07/29/08	<0.4	<0.5	<0.4	<0.15	<0.15	1582.27	7.90	1.64	353	200
	02/11/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.79	8.02	1.58	279	207
	05/21/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.51	7.69	1.89	360	198
	11/19/09	<0.4	<0.5	<0.4	<0.15	<0.15	1581.96	6.35	1.91	364	208
	02/25/10	<0.4	<0.5	0.66	<0.15	<0.15	1582.05	7.68	1.83	249	200
	05/12/10	<0.4	<0.5	0.51	0.18	<0.15	1582.01	8.12	1.73	212	201
	10/25/10	<0.25	<0.25	<0.3	<0.21	<0.22	1582.09	8.66	1.92	277	213
	04/26/11	<0.5	<0.5	<0.5	<0.2	<0.2	1582.82	7.80	1.56	276	210
	10/28/11	<0.5	<0.5	<0.5	<0.2	<0.2	1582.42	8.08	1.74	191	238
	04/27/12	<0.50	<0.50	0.83	0.44	<0.20	1582.52	6.82	1.97	204	224
	01/09/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.70	7.13	1.66	202	229
	04/10/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.70	7.15	1.84	198	365
	10/29/14	<0.12	<0.25	<0.17	<0.19	<0.10	1582.43	7.08	1.93		399
	04/28/15	<0.12	<0.25	<0.17	<0.19	<0.10	1583.07	7.24	0.96		338
	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
		continued on next page									



**TABLE 2**  
**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>B-13B</b>	11/17/16	continued from previous page									
	04/28/17	<0.41	<0.35	0.62	<0.16	<0.20	1583.24	8.14	2.39	327	408
	10/31/17	<0.41	<0.35	<0.37	<0.16	<0.20	1583.53	8.34	2.19	351	588
	04/27/18	<0.41	<0.35	0.56	<0.16	<0.20	1583.21	8.07	2.28	332	431
	10/30/18	<0.41	<0.35	1.3	0.43	<0.20	1582.38	7.02	2.91	304	503
	04/09/19	<0.21	<0.23	1.2	<0.20	<0.18	1583.20	6.97	2.01	419	450
	10/29/19	<0.41	<0.35	1.7	0.57	<0.20	1582.71	7.09	2.23	354	471
		<0.41	<0.35	2.6	0.74	<0.20	1583.25	7.01	1.99	336	538
<b>B-15 (42')</b>	12/07/04	Top of Casing Elevation = 1601.77 ft MSL									
		<0.5	<0.4	<0.5	<0.6	<0.3	1583.36	8.73	1.19	136	410.9
<b>EXW-2</b>	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
<b>EXW-4</b>	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	9.1	<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	0.92	<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
<b>EXW-5</b>	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					
	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
		continued on next page									

TABLE 2  
Groundwater Sample Analytical Results  
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	GW Elevation	pH	DO	Redox	Conductivity	
ES		70	100	5	5	0.2						
PAL		7	20	0.5	0.5	0.02						
EXW-5	08/22/07	continued from previous page										
	11/29/07	1.5	<0.5	<0.4	0.21	1.3		6.69	2.14	121	116	
	07/29/08	2.7	<0.5	<0.4	0.25	1.2		7.35	1.84	88	106	
		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	
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										
MW-17	11/01/93	Top of Casing Elevation = 1591.80 ft MSL										
	01/01/94	230	3.5	23	40	1.2						
	07/01/94	400	ND	40	58	ND						
	01/01/95	380	ND	44	40	ND						
	06/01/95	12	ND	0.53	112	ND						
	01/01/96	ND	ND	380	53	12						
	06/06/96	180	40	32	31	ND						
	01/01/97	290	13	80	40	6.7						
	10/01/97	860	7	33	53	3.2						
	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	
	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	
		continued on next page										

TABLE 2  
Groundwater Sample Analytical Results  
Minocqua Cleaners, Minocqua, WI

Analyte	Sampling Date	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethylene	Tetrachloroethene	Trichloroethene	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									
MW-17	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
		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

TABLE 2  
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 = 1591.60 ft MSL											
MW-18A	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
Top of Casing Elevation = 1591.73 ft MSL											
MW-19 (17')	11/01/93	35	0.65	2.3	12	ND					
	01/01/94	15	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	13	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	1	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	4.1	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		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	12	<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
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

**TABLE 2**  
**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 = 1593.78 ft MSL											
<b>MW-20</b> (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		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
Top of Casing Elevation = 1591.51 ft MSL											
<b>MW-21</b> (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	490	<10	36	42	6.2	1580.90	6.81	2.42	242	226
	Qtr	450	<10	32	42	<3.0	1580.80	7.58	1.56	253	208
	Pilot Study	500	<10	36	58	<3.0	1580.57	7.68	2.02	234	205
	Qtr	98	1.1	21	12	<0.15	1580.44	7.63	2.03	301	212
	Qtr	50	<0.5	9.3	3.4	3	1581.40	7.39	2.01	325	240
	Pilot Study	91	1.1	18	5	1.6	1580.99	5.84	2.92	441	267
	Qtr	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
	10/28/14	<0.12	<0.25	3.4	<0.19	<0.10	1583.56	6.17	0.89		203
	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	
Top of Casing Elevation = 1592.66 ft MSL											
<b>MW-21A</b> (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	14	<0.5	2	3.3	1.4	1579.24	7.98	2.04	226	215
	Qtr	4.6	<0.5	1.7	2.5	<0.15	1576.29	8.51	1.35	303	222
	Pilot Study	2.9	<0.50	1.5	2.1	<0.15	1579.44	8.49	1.30	2.08	213
	Qtr	16	<0.50	1.4	1.9	1.3	1579.08	7.67	2.13	213	220
	Qtr	9.2	<0.5	0.99	1.1	1	1579.75	7.65	2.02	188	217
	Pilot Study	31	0.6	1.1	1.8	5.5	1579.49	7.52	1.41	263	217
	Qtr	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	

**TABLE 2**  
**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>GW</b>	Mar-96			3.6	5.2						
<b>Outfall</b>	Jun-96			4.6	4.9						
(Discharge)	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

TABLE 2  
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						
Well-3	08/07/84		<1.0	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	2.1	<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	

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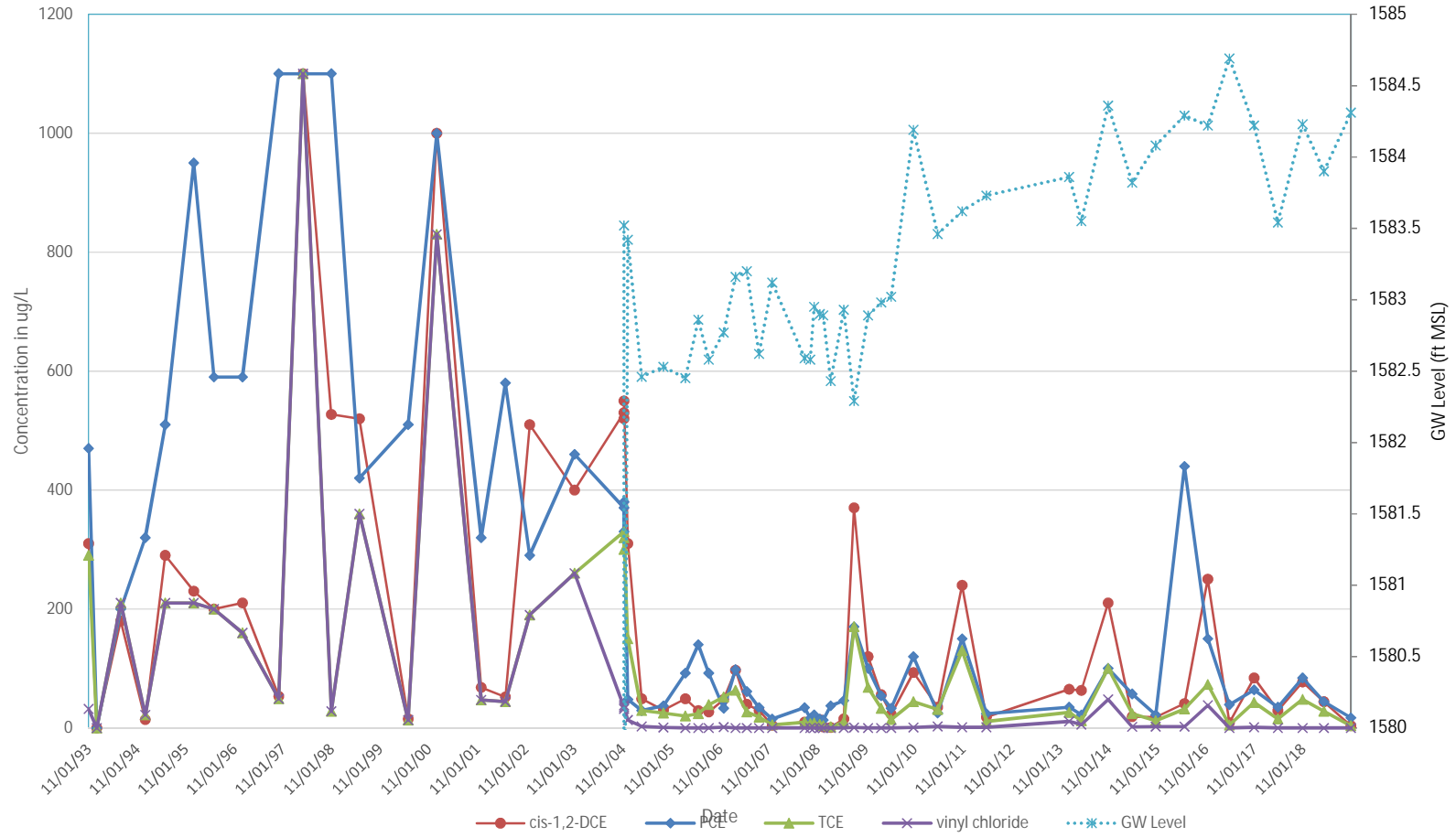
**TABLE 2**  
**Groundwater Sample Analytical Results**  
**Minocqua Cleaners, Minocqua, WI**

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>Well-3 (cont.)</b>											
	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

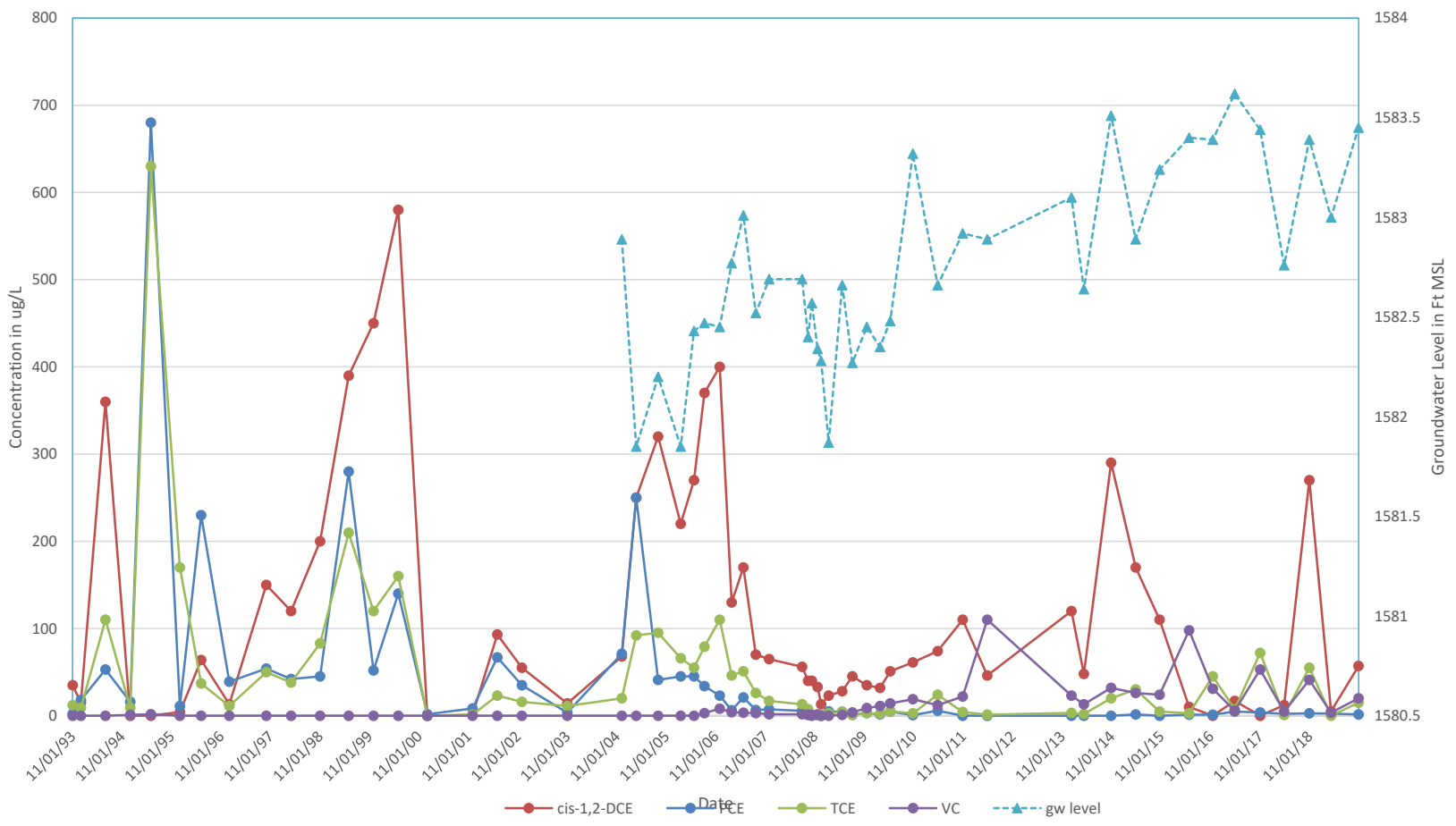
Notes: Concentrations are in ug/L  
MSL - mean sea level

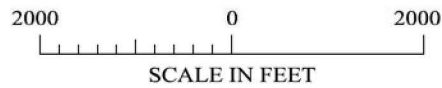


Concentrations vs. Time Well B-13, Minocqua Cleaners



Concentrations vs. Time Well MW-19, Minocqua Cleaners





Woodruff & Hazelhurst Quadrangle  
 Wisconsin - Onedia County  
 7.5 Minute Series (Topographic)

Contour Interval 10 Feet  
 1982

FIGURE 1  
 SITE LOCATION MAP  
 Minocqua Cleaners  
 Minocqua, WI

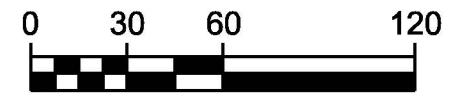


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 Web Address: www.msa-ps.com  
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**LEGEND**

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



**FIGURE 2**

**SITE LAYOUT MAP**

MINOCQUA CLEANERS  
MINOCQUA, WI



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DRAWN BY CAR	DATE 4/2017	SHEET NO.
CHECKED BY JE	SCALE AS SHOWN	FILE NO. 8267007 F2 SITE

CHICAGO AVENUE

MANITOWISH ST

PINE ST

ST. GERMAIN ST

TREATMENT DISCHARGE TO LAKE

FORMER DRY CLEANING BUILDING (JACK MAHONEY)

GARAGE

ZENTNER

RISTO

SHED

SCHILLING

MUNICIPAL WELL #3

CASCADING WEIR

COLLECTOR MANHOLE

YELTON

MUNICIPAL WELL #4

LEGEND

-  MONITORING WELL
-  EXTRACTION WELL
-  ABANDONED EXTRACTION WELL
-  VAPOR SAMPLE LOCATION

V-1 = SUBSLAB  
V-2 = DEEP SOIL PROBE

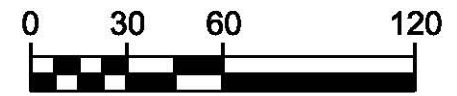


FIGURE 3

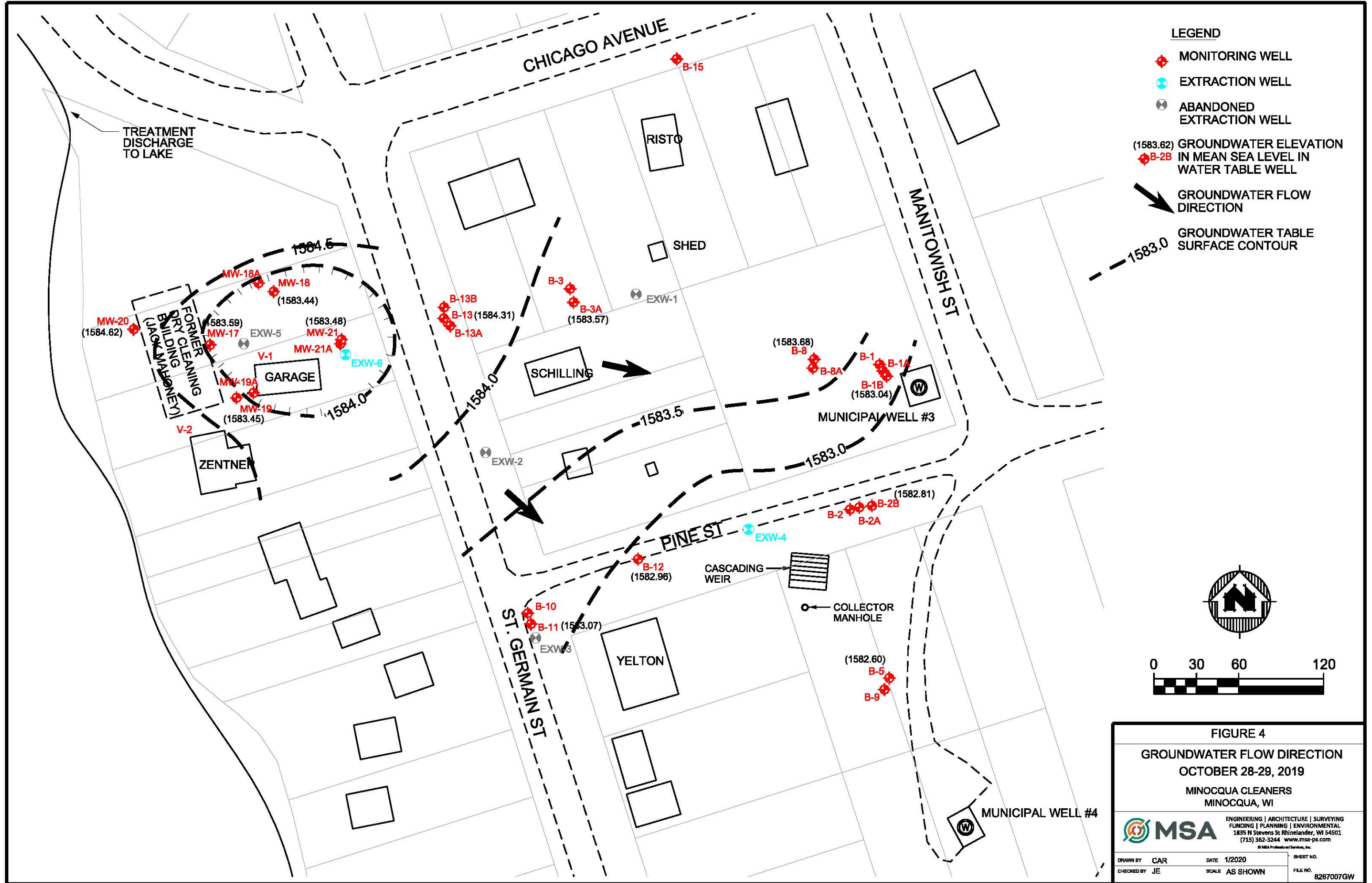
WELL LOCATION MAP

MINOCQUA CLEANERS  
MINOCQUA, WI

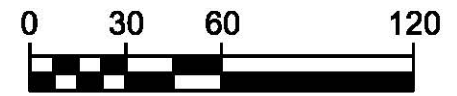


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- LEGEND**
- MONITORING WELL
  - EXTRACTION WELL
  - ABANDONED EXTRACTION WELL
  - (1583.62) B-2B (1583.62) GROUNDWATER ELEVATION IN MEAN SEA LEVEL IN WATER TABLE WELL
  - GROUNDWATER FLOW DIRECTION
  - GROUNDWATER TABLE SURFACE CONTOUR



**FIGURE 4**  
**GROUNDWATER FLOW DIRECTION**  
**OCTOBER 28-29, 2019**  
**MINOCQUA CLEANERS**  
**MINOCQUA, WI**

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CHICAGO AVENUE

- 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	Light Blue
10-50	Green
50-100	Orange

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

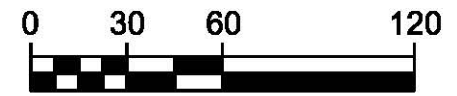


FIGURE 5

**GROUNDWATER CONCENTRATIONS**

MINOCQUA CLEANERS  
MINOCQUA, WI



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8267007 GW concentration F5 Oct 2019.dgn 1/30/2020 2:50:24 PM CRooyakkers

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-154152-1  
Client Project/Site: Minocqua Cleaners

For:  
MSA Professional Services, Inc  
1230 South Blvd  
Baraboo, Wisconsin 53913

Attn: Mr. Richard Lyster



Authorized for release by:  
11/12/2018 2:09:43 PM

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

- 1
- 2
- 3
- 4
- 5
- 6
- 7
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- 9
- 10
- 11
- 12
- 13
- 14
- 15





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# Case Narrative

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Job ID: 500-154152-1**

**Laboratory: TestAmerica Chicago**

## Narrative

**Job Narrative  
500-154152-1**

## Comments

No additional comments.

## Receipt

The samples were received on 11/1/2018 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.8° C and 3.2° C.

## GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 490-555876/556217 recovered outside control limits for the following analytes: Bromomethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The following volatile sample was analyzed with significant headspace in the sample container(s): (500-154152-C-1 MSD). Significant headspace is defined as a bubble greater than 6 mm in diameter.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

## VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Client Sample ID: EXW-4

## Lab Sample ID: 500-154152-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.6		1.0	0.21	ug/L	1		8260B	Total/NA
Tetrachloroethene	0.22	J	1.0	0.14	ug/L	1		8260B	Total/NA
Trichloroethene	0.92	J	1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: EXW-6

## Lab Sample ID: 500-154152-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	16		1.0	0.21	ug/L	1		8260B	Total/NA
Tetrachloroethene	6.7		1.0	0.14	ug/L	1		8260B	Total/NA
Trichloroethene	9.3		1.0	0.20	ug/L	1		8260B	Total/NA
Vinyl chloride	0.92	J	1.0	0.18	ug/L	1		8260B	Total/NA

## Client Sample ID: Muni #3

## Lab Sample ID: 500-154152-3

No Detections.

## Client Sample ID: MW-17

## Lab Sample ID: 500-154152-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	84		1.0	0.21	ug/L	1		8260B	Total/NA
Tetrachloroethene	0.97	J	1.0	0.14	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	2.5		1.0	0.23	ug/L	1		8260B	Total/NA
Trichloroethene	0.71	J	1.0	0.20	ug/L	1		8260B	Total/NA
Vinyl chloride	27		1.0	0.18	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-18

## Lab Sample ID: 500-154152-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.8		1.0	0.21	ug/L	1		8260B	Total/NA
Tetrachloroethene	0.33	J	1.0	0.14	ug/L	1		8260B	Total/NA
Trichloroethene	0.98	J	1.0	0.20	ug/L	1		8260B	Total/NA
Vinyl chloride	0.69	J	1.0	0.18	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-19

## Lab Sample ID: 500-154152-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	270		5.0	1.1	ug/L	5		8260B	Total/NA
Tetrachloroethene	2.6		1.0	0.14	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	3.5		1.0	0.23	ug/L	1		8260B	Total/NA
Trichloroethene	55		1.0	0.20	ug/L	1		8260B	Total/NA
Vinyl chloride	41		1.0	0.18	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-21

## Lab Sample ID: 500-154152-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	5.4		1.0	0.14	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-21A

## Lab Sample ID: 500-154152-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	30		1.0	0.21	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Client Sample ID: MW-21A (Continued)

Lab Sample ID: 500-154152-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.58	J	1.0	0.14	ug/L	1		8260B	Total/NA
Trichloroethene	3.5		1.0	0.20	ug/L	1		8260B	Total/NA
Vinyl chloride	1.9		1.0	0.18	ug/L	1		8260B	Total/NA

## Client Sample ID: B-1

Lab Sample ID: 500-154152-9

No Detections.

## Client Sample ID: B-1A

Lab Sample ID: 500-154152-10

No Detections.

## Client Sample ID: B-1B

Lab Sample ID: 500-154152-11

No Detections.

## Client Sample ID: B-3

Lab Sample ID: 500-154152-12

No Detections.

## Client Sample ID: B-3A

Lab Sample ID: 500-154152-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.50	J	1.0	0.14	ug/L	1		8260B	Total/NA

## Client Sample ID: B-10

Lab Sample ID: 500-154152-14

No Detections.

## Client Sample ID: B-11

Lab Sample ID: 500-154152-15

No Detections.

## Client Sample ID: B-12

Lab Sample ID: 500-154152-16

No Detections.

## Client Sample ID: B-13

Lab Sample ID: 500-154152-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.5		1.0	0.23	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	77		1.0	0.21	ug/L	1		8260B	Total/NA
Tetrachloroethene	84		1.0	0.14	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.79	J	1.0	0.23	ug/L	1		8260B	Total/NA
Trichloroethene	48		1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: B-13A

Lab Sample ID: 500-154152-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.94	J	1.0	0.14	ug/L	1		8260B	Total/NA
Trichloroethene	0.33	J	1.0	0.20	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Client Sample ID: B-13B

Lab Sample ID: 500-154152-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.2		1.0	0.14	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-18A

Lab Sample ID: 500-154152-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.63	J	1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-19A

Lab Sample ID: 500-154152-21

No Detections.

## Client Sample ID: Discharge

Lab Sample ID: 500-154152-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.4		1.0	0.21	ug/L	1		8260B	Total/NA
Tetrachloroethene	0.34	J	1.0	0.14	ug/L	1		8260B	Total/NA
Trichloroethene	0.82	J	1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: B-1A Dup

Lab Sample ID: 500-154152-23

No Detections.

## Client Sample ID: Trip Blank

Lab Sample ID: 500-154152-24

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
5030B	Purge and Trap	SW846	TAL NSH

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177



# Sample Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-154152-1	EXW-4	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-2	EXW-6	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-3	Muni #3	Ground Water	10/30/18 00:00	11/01/18 09:50
500-154152-4	MW-17	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-5	MW-18	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-6	MW-19	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-7	MW-21	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-8	MW-21A	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-9	B-1	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-10	B-1A	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-11	B-1B	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-12	B-3	Ground Water	10/30/18 00:00	11/01/18 09:50
500-154152-13	B-3A	Ground Water	10/30/18 00:00	11/01/18 09:50
500-154152-14	B-10	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-15	B-11	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-16	B-12	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-17	B-13	Ground Water	10/30/18 00:00	11/01/18 09:50
500-154152-18	B-13A	Ground Water	10/30/18 00:00	11/01/18 09:50
500-154152-19	B-13B	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-20	MW-18A	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-21	MW-19A	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-22	Discharge	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-23	B-1A Dup	Ground Water	10/29/18 00:00	11/01/18 09:50
500-154152-24	Trip Blank	Water	10/29/18 00:00	11/01/18 09:50

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: EXW-4**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-1**

**Matrix: Ground Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 15:23	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 15:23	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 15:23	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 15:23	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 15:23	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 15:23	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 15:23	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 15:23	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 15:23	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 15:23	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 15:23	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 15:23	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 15:23	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 15:23	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 15:23	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 15:23	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 15:23	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 15:23	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 15:23	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 15:23	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 15:23	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 15:23	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 15:23	1
Bromomethane	<0.35	* F1	1.0	0.35	ug/L			11/08/18 15:23	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 15:23	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 15:23	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 15:23	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 15:23	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 15:23	1
<b>cis-1,2-Dichloroethene</b>	<b>1.6</b>		1.0	0.21	ug/L			11/08/18 15:23	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 15:23	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 15:23	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 15:23	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 15:23	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 15:23	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 15:23	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 15:23	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 15:23	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 15:23	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1

TestAmerica Chicago



# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: EXW-4**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-1**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 15:23	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
<b>Tetrachloroethene</b>	<b>0.22</b>	<b>J</b>	1.0	0.14	ug/L			11/08/18 15:23	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 15:23	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 15:23	1
<b>Trichloroethene</b>	<b>0.92</b>	<b>J</b>	1.0	0.20	ug/L			11/08/18 15:23	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 15:23	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 15:23	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 15:23	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	110		70 - 130					11/08/18 15:23	1
4-Bromofluorobenzene (Surr)	96		70 - 130					11/08/18 15:23	1
Toluene-d8 (Surr)	108		70 - 130					11/08/18 15:23	1

**Client Sample ID: EXW-6**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-2**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 15:50	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 15:50	1
1,1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 15:50	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 15:50	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 15:50	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 15:50	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 15:50	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 15:50	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 15:50	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 15:50	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 15:50	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 15:50	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 15:50	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 15:50	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 15:50	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 15:50	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 15:50	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 15:50	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 15:50	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 15:50	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 15:50	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 15:50	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: EXW-6**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-2**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 15:50	1
Bromomethane	<0.35	*	1.0	0.35	ug/L			11/08/18 15:50	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 15:50	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 15:50	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 15:50	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 15:50	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 15:50	1
<b>cis-1,2-Dichloroethene</b>	<b>16</b>		1.0	0.21	ug/L			11/08/18 15:50	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 15:50	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 15:50	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 15:50	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 15:50	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 15:50	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 15:50	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 15:50	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 15:50	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 15:50	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 15:50	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
<b>Tetrachloroethene</b>	<b>6.7</b>		1.0	0.14	ug/L			11/08/18 15:50	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 15:50	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 15:50	1
<b>Trichloroethene</b>	<b>9.3</b>		1.0	0.20	ug/L			11/08/18 15:50	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 15:50	1
<b>Vinyl chloride</b>	<b>0.92 J</b>		1.0	0.18	ug/L			11/08/18 15:50	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 15:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		70 - 130		11/08/18 15:50	1
4-Bromofluorobenzene (Surr)	103		70 - 130		11/08/18 15:50	1
Toluene-d8 (Surr)	107		70 - 130		11/08/18 15:50	1

**Client Sample ID: Muni #3**

**Date Collected: 10/30/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-3**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 16:17	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 16:17	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 16:17	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 16:17	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 16:17	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: Muni #3**

**Lab Sample ID: 500-154152-3**

**Date Collected: 10/30/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 16:17	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 16:17	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 16:17	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 16:17	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 16:17	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 16:17	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 16:17	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 16:17	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 16:17	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 16:17	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 16:17	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 16:17	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 16:17	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 16:17	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 16:17	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 16:17	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 16:17	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 16:17	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 16:17	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 16:17	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 16:17	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 16:17	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 16:17	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 16:17	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 16:17	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 16:17	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 16:17	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 16:17	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 16:17	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 16:17	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 16:17	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 16:17	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 16:17	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 16:17	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 16:17	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 16:17	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: Muni #3**

**Date Collected: 10/30/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-3**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 16:17	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 16:17	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 16:17	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 16:17	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 16:17	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		70 - 130		11/08/18 16:17	1
4-Bromofluorobenzene (Surr)	102		70 - 130		11/08/18 16:17	1
Toluene-d8 (Surr)	106		70 - 130		11/08/18 16:17	1

**Client Sample ID: MW-17**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-4**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 16:43	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 16:43	1
1,1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 16:43	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 16:43	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 16:43	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 16:43	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 16:43	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 16:43	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 16:43	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 16:43	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 16:43	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 16:43	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 16:43	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 16:43	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 16:43	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 16:43	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 16:43	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 16:43	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 16:43	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 16:43	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 16:43	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 16:43	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 16:43	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 16:43	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 16:43	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 16:43	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 16:43	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: MW-17**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-4**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 16:43	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 16:43	1
<b>cis-1,2-Dichloroethene</b>	<b>84</b>		1.0	0.21	ug/L			11/08/18 16:43	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 16:43	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 16:43	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 16:43	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 16:43	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 16:43	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 16:43	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 16:43	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 16:43	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 16:43	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 16:43	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
<b>Tetrachloroethene</b>	<b>0.97 J</b>		1.0	0.14	ug/L			11/08/18 16:43	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
<b>trans-1,2-Dichloroethene</b>	<b>2.5</b>		1.0	0.23	ug/L			11/08/18 16:43	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 16:43	1
<b>Trichloroethene</b>	<b>0.71 J</b>		1.0	0.20	ug/L			11/08/18 16:43	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 16:43	1
<b>Vinyl chloride</b>	<b>27</b>		1.0	0.18	ug/L			11/08/18 16:43	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 16:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		70 - 130		11/08/18 16:43	1
4-Bromofluorobenzene (Surr)	103		70 - 130		11/08/18 16:43	1
Toluene-d8 (Surr)	107		70 - 130		11/08/18 16:43	1

**Client Sample ID: MW-18**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-5**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 17:10	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:10	1
1,1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:10	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:10	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 17:10	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 17:10	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 17:10	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 17:10	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 17:10	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 17:10	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: MW-18**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-5**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 17:10	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 17:10	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 17:10	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 17:10	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 17:10	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 17:10	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 17:10	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 17:10	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 17:10	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 17:10	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 17:10	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 17:10	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 17:10	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 17:10	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 17:10	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 17:10	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 17:10	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 17:10	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 17:10	1
<b>cis-1,2-Dichloroethene</b>	<b>1.8</b>		1.0	0.21	ug/L			11/08/18 17:10	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 17:10	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 17:10	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 17:10	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 17:10	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 17:10	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 17:10	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 17:10	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 17:10	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 17:10	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 17:10	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
<b>Tetrachloroethene</b>	<b>0.33 J</b>		1.0	0.14	ug/L			11/08/18 17:10	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 17:10	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 17:10	1
<b>Trichloroethene</b>	<b>0.98 J</b>		1.0	0.20	ug/L			11/08/18 17:10	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 17:10	1
<b>Vinyl chloride</b>	<b>0.69 J</b>		1.0	0.18	ug/L			11/08/18 17:10	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: MW-18**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-5**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 17:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		70 - 130					11/08/18 17:10	1
4-Bromofluorobenzene (Surr)	102		70 - 130					11/08/18 17:10	1
Toluene-d8 (Surr)	104		70 - 130					11/08/18 17:10	1

**Client Sample ID: MW-19**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-6**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 17:36	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:36	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:36	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:36	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 17:36	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 17:36	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 17:36	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 17:36	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 17:36	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 17:36	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 17:36	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 17:36	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 17:36	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 17:36	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 17:36	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 17:36	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 17:36	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 17:36	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 17:36	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 17:36	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 17:36	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 17:36	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 17:36	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 17:36	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 17:36	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 17:36	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 17:36	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 17:36	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 17:36	1
<b>cis-1,2-Dichloroethene</b>	<b>270</b>		5.0	1.1	ug/L			11/09/18 14:45	5
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 17:36	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: MW-19**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-6**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 17:36	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 17:36	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 17:36	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 17:36	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 17:36	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 17:36	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 17:36	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 17:36	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 17:36	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
<b>Tetrachloroethene</b>	<b>2.6</b>		1.0	0.14	ug/L			11/08/18 17:36	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
<b>trans-1,2-Dichloroethene</b>	<b>3.5</b>		1.0	0.23	ug/L			11/08/18 17:36	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 17:36	1
<b>Trichloroethene</b>	<b>55</b>		1.0	0.20	ug/L			11/08/18 17:36	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 17:36	1
<b>Vinyl chloride</b>	<b>41</b>		1.0	0.18	ug/L			11/08/18 17:36	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 17:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		70 - 130		11/08/18 17:36	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 130		11/09/18 14:45	5
4-Bromofluorobenzene (Surr)	102		70 - 130		11/08/18 17:36	1
4-Bromofluorobenzene (Surr)	102		70 - 130		11/09/18 14:45	5
Toluene-d8 (Surr)	105		70 - 130		11/08/18 17:36	1
Toluene-d8 (Surr)	106		70 - 130		11/09/18 14:45	5

**Client Sample ID: MW-21**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-7**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 18:03	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:03	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:03	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:03	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 18:03	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 18:03	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 18:03	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 18:03	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 18:03	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 18:03	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 18:03	1

TestAmerica Chicago



# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: MW-21**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-7**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 18:03	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 18:03	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 18:03	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 18:03	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 18:03	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 18:03	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 18:03	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 18:03	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 18:03	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 18:03	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 18:03	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 18:03	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 18:03	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 18:03	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 18:03	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 18:03	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 18:03	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 18:03	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 18:03	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 18:03	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 18:03	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 18:03	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 18:03	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 18:03	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 18:03	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 18:03	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 18:03	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 18:03	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 18:03	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
<b>Tetrachloroethene</b>	<b>5.4</b>		1.0	0.14	ug/L			11/08/18 18:03	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 18:03	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 18:03	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 18:03	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 18:03	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 18:03	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 18:03	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: MW-21**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-7**

**Matrix: Ground Water**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		70 - 130		11/08/18 18:03	1
4-Bromofluorobenzene (Surr)	103		70 - 130		11/08/18 18:03	1
Toluene-d8 (Surr)	104		70 - 130		11/08/18 18:03	1

**Client Sample ID: MW-21A**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-8**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 18:29	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:29	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:29	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:29	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 18:29	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 18:29	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 18:29	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 18:29	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 18:29	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 18:29	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 18:29	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 18:29	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 18:29	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 18:29	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 18:29	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 18:29	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 18:29	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 18:29	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 18:29	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 18:29	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 18:29	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 18:29	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 18:29	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 18:29	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 18:29	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 18:29	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 18:29	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 18:29	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 18:29	1
<b>cis-1,2-Dichloroethene</b>	<b>30</b>		1.0	0.21	ug/L			11/08/18 18:29	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 18:29	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 18:29	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 18:29	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: MW-21A**

**Lab Sample ID: 500-154152-8**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 18:29	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 18:29	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 18:29	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 18:29	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 18:29	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 18:29	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 18:29	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
<b>Tetrachloroethene</b>	<b>0.58</b>	<b>J</b>	1.0	0.14	ug/L			11/08/18 18:29	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 18:29	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 18:29	1
<b>Trichloroethene</b>	<b>3.5</b>		1.0	0.20	ug/L			11/08/18 18:29	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 18:29	1
<b>Vinyl chloride</b>	<b>1.9</b>		1.0	0.18	ug/L			11/08/18 18:29	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 18:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		70 - 130		11/08/18 18:29	1
4-Bromofluorobenzene (Surr)	102		70 - 130		11/08/18 18:29	1
Toluene-d8 (Surr)	105		70 - 130		11/08/18 18:29	1

**Client Sample ID: B-1**

**Lab Sample ID: 500-154152-9**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 18:56	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:56	1
1,1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:56	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:56	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 18:56	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 18:56	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 18:56	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 18:56	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 18:56	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 18:56	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 18:56	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 18:56	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 18:56	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 18:56	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 18:56	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 18:56	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-1**

**Lab Sample ID: 500-154152-9**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 18:56	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 18:56	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 18:56	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 18:56	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 18:56	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 18:56	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 18:56	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 18:56	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 18:56	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 18:56	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 18:56	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 18:56	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 18:56	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 18:56	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 18:56	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 18:56	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 18:56	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 18:56	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 18:56	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 18:56	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 18:56	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 18:56	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 18:56	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 18:56	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 18:56	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 18:56	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 18:56	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 18:56	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 18:56	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 18:56	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 18:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		70 - 130		11/08/18 18:56	1
4-Bromofluorobenzene (Surr)	101		70 - 130		11/08/18 18:56	1
Toluene-d8 (Surr)	106		70 - 130		11/08/18 18:56	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-1A**  
**Date Collected: 10/29/18 00:00**  
**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-10**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 19:22	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 19:22	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 19:22	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 19:22	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 19:22	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 19:22	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 19:22	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 19:22	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 19:22	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 19:22	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 19:22	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 19:22	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 19:22	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 19:22	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 19:22	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 19:22	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 19:22	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 19:22	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 19:22	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 19:22	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 19:22	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 19:22	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 19:22	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 19:22	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 19:22	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 19:22	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 19:22	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 19:22	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 19:22	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 19:22	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 19:22	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 19:22	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 19:22	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 19:22	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 19:22	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 19:22	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 19:22	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 19:22	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 19:22	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-1A**  
**Date Collected: 10/29/18 00:00**  
**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-10**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 19:22	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 19:22	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 19:22	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 19:22	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 19:22	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 19:22	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 19:22	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 19:22	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	112		70 - 130					11/08/18 19:22	1
4-Bromofluorobenzene (Surr)	105		70 - 130					11/08/18 19:22	1
Toluene-d8 (Surr)	106		70 - 130					11/08/18 19:22	1

**Client Sample ID: B-1B**  
**Date Collected: 10/29/18 00:00**  
**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-11**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 19:49	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 19:49	1
1,1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 19:49	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 19:49	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 19:49	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 19:49	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 19:49	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 19:49	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 19:49	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 19:49	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 19:49	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 19:49	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 19:49	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 19:49	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 19:49	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 19:49	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 19:49	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 19:49	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 19:49	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 19:49	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 19:49	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 19:49	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-1B**

**Lab Sample ID: 500-154152-11**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 19:49	1
Bromomethane	<0.35	*	1.0	0.35	ug/L			11/08/18 19:49	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 19:49	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 19:49	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 19:49	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 19:49	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 19:49	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 19:49	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 19:49	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 19:49	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 19:49	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 19:49	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 19:49	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 19:49	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 19:49	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 19:49	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 19:49	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 19:49	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 19:49	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 19:49	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 19:49	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 19:49	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 19:49	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 19:49	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 19:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		70 - 130		11/08/18 19:49	1
4-Bromofluorobenzene (Surr)	104		70 - 130		11/08/18 19:49	1
Toluene-d8 (Surr)	105		70 - 130		11/08/18 19:49	1

**Client Sample ID: B-3**

**Lab Sample ID: 500-154152-12**

**Date Collected: 10/30/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 20:16	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 20:16	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 20:16	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 20:16	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 20:16	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-3**

**Lab Sample ID: 500-154152-12**

**Date Collected: 10/30/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 20:16	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 20:16	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 20:16	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 20:16	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 20:16	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 20:16	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 20:16	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 20:16	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 20:16	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 20:16	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 20:16	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 20:16	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 20:16	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 20:16	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 20:16	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 20:16	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 20:16	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 20:16	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 20:16	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 20:16	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 20:16	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 20:16	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 20:16	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 20:16	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 20:16	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 20:16	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 20:16	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 20:16	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 20:16	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 20:16	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 20:16	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 20:16	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 20:16	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 20:16	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 20:16	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 20:16	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1

TestAmerica Chicago



# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-3**

**Date Collected: 10/30/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-12**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 20:16	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 20:16	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 20:16	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 20:16	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 20:16	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		70 - 130		11/08/18 20:16	1
4-Bromofluorobenzene (Surr)	103		70 - 130		11/08/18 20:16	1
Toluene-d8 (Surr)	107		70 - 130		11/08/18 20:16	1

**Client Sample ID: B-3A**

**Date Collected: 10/30/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-13**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 20:42	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 20:42	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 20:42	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 20:42	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 20:42	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 20:42	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 20:42	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 20:42	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 20:42	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 20:42	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 20:42	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 20:42	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 20:42	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 20:42	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 20:42	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 20:42	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 20:42	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 20:42	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 20:42	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 20:42	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 20:42	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 20:42	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 20:42	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 20:42	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 20:42	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 20:42	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 20:42	1

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# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-3A**  
**Date Collected: 10/30/18 00:00**  
**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-13**  
**Matrix: Ground Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 20:42	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 20:42	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 20:42	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 20:42	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 20:42	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 20:42	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 20:42	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 20:42	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 20:42	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 20:42	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 20:42	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 20:42	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 20:42	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
<b>Tetrachloroethene</b>	<b>0.50</b>	<b>J</b>	1.0	0.14	ug/L			11/08/18 20:42	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 20:42	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 20:42	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 20:42	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 20:42	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 20:42	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 20:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		70 - 130					11/08/18 20:42	1
4-Bromofluorobenzene (Surr)	96		70 - 130					11/08/18 20:42	1
Toluene-d8 (Surr)	107		70 - 130					11/08/18 20:42	1

**Client Sample ID: B-10**  
**Date Collected: 10/29/18 00:00**  
**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-14**  
**Matrix: Ground Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 21:09	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 21:09	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 21:09	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 21:09	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 21:09	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 21:09	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 21:09	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 21:09	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 21:09	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 21:09	1

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# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-10**

**Lab Sample ID: 500-154152-14**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 21:09	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 21:09	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 21:09	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 21:09	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 21:09	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 21:09	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 21:09	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 21:09	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 21:09	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 21:09	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 21:09	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 21:09	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 21:09	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 21:09	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 21:09	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 21:09	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 21:09	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 21:09	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 21:09	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 21:09	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 21:09	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 21:09	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 21:09	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 21:09	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 21:09	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 21:09	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 21:09	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 21:09	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 21:09	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 21:09	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 21:09	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 21:09	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 21:09	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 21:09	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 21:09	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 21:09	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Client Sample ID: B-10

Date Collected: 10/29/18 00:00

Date Received: 11/01/18 09:50

## Lab Sample ID: 500-154152-14

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 21:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		70 - 130					11/08/18 21:09	1
4-Bromofluorobenzene (Surr)	99		70 - 130					11/08/18 21:09	1
Toluene-d8 (Surr)	105		70 - 130					11/08/18 21:09	1

## Client Sample ID: B-11

Date Collected: 10/29/18 00:00

Date Received: 11/01/18 09:50

## Lab Sample ID: 500-154152-15

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 21:35	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 21:35	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 21:35	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 21:35	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 21:35	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 21:35	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 21:35	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 21:35	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 21:35	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 21:35	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 21:35	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 21:35	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 21:35	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 21:35	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 21:35	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 21:35	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 21:35	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 21:35	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 21:35	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 21:35	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 21:35	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 21:35	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 21:35	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 21:35	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 21:35	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 21:35	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 21:35	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 21:35	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 21:35	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 21:35	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 21:35	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-11**

**Lab Sample ID: 500-154152-15**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 21:35	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 21:35	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 21:35	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 21:35	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 21:35	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 21:35	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 21:35	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 21:35	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 21:35	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 21:35	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 21:35	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 21:35	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 21:35	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 21:35	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 21:35	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 21:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		70 - 130		11/08/18 21:35	1
4-Bromofluorobenzene (Surr)	101		70 - 130		11/08/18 21:35	1
Toluene-d8 (Surr)	107		70 - 130		11/08/18 21:35	1

**Client Sample ID: B-12**

**Lab Sample ID: 500-154152-16**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 22:02	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 22:02	1
1,1,1,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 22:02	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 22:02	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 22:02	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 22:02	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 22:02	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 22:02	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 22:02	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 22:02	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 22:02	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 22:02	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 22:02	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 22:02	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-12**

**Lab Sample ID: 500-154152-16**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 22:02	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 22:02	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 22:02	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 22:02	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 22:02	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 22:02	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 22:02	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 22:02	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 22:02	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 22:02	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 22:02	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 22:02	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 22:02	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 22:02	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 22:02	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 22:02	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 22:02	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 22:02	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 22:02	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 22:02	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 22:02	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 22:02	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 22:02	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 22:02	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 22:02	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 22:02	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 22:02	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 22:02	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 22:02	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 22:02	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 22:02	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 22:02	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 22:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		70 - 130		11/08/18 22:02	1
4-Bromofluorobenzene (Surr)	97		70 - 130		11/08/18 22:02	1
Toluene-d8 (Surr)	108		70 - 130		11/08/18 22:02	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-13**

**Date Collected: 10/30/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-17**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 22:29	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 22:29	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 22:29	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 22:29	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 22:29	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 22:29	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 22:29	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 22:29	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 22:29	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 22:29	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 22:29	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 22:29	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 22:29	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 22:29	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 22:29	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 22:29	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 22:29	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 22:29	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 22:29	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 22:29	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 22:29	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 22:29	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 22:29	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 22:29	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 22:29	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 22:29	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 22:29	1
<b>Chloroform</b>	<b>2.5</b>		1.0	0.23	ug/L			11/08/18 22:29	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 22:29	1
<b>cis-1,2-Dichloroethene</b>	<b>77</b>		1.0	0.21	ug/L			11/08/18 22:29	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 22:29	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 22:29	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 22:29	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 22:29	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 22:29	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 22:29	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 22:29	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 22:29	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 22:29	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-13**

**Date Collected: 10/30/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-17**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 22:29	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
<b>Tetrachloroethene</b>	<b>84</b>		1.0	0.14	ug/L			11/08/18 22:29	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
<b>trans-1,2-Dichloroethene</b>	<b>0.79</b>	<b>J</b>	1.0	0.23	ug/L			11/08/18 22:29	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 22:29	1
<b>Trichloroethene</b>	<b>48</b>		1.0	0.20	ug/L			11/08/18 22:29	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 22:29	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 22:29	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 22:29	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	112		70 - 130					11/08/18 22:29	1
4-Bromofluorobenzene (Surr)	95		70 - 130					11/08/18 22:29	1
Toluene-d8 (Surr)	107		70 - 130					11/08/18 22:29	1

**Client Sample ID: B-13A**

**Date Collected: 10/30/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-18**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 22:55	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 22:55	1
1,1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 22:55	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 22:55	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 22:55	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 22:55	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 22:55	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 22:55	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 22:55	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 22:55	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 22:55	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 22:55	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 22:55	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 22:55	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 22:55	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 22:55	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 22:55	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 22:55	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 22:55	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 22:55	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 22:55	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 22:55	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1

TestAmerica Chicago



# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-13A**

**Date Collected: 10/30/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-18**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 22:55	1
Bromomethane	<0.35	*	1.0	0.35	ug/L			11/08/18 22:55	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 22:55	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 22:55	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 22:55	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 22:55	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 22:55	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 22:55	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 22:55	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 22:55	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 22:55	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 22:55	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 22:55	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 22:55	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 22:55	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 22:55	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 22:55	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 22:55	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
<b>Tetrachloroethene</b>	<b>0.94</b>	<b>J</b>	1.0	0.14	ug/L			11/08/18 22:55	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 22:55	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 22:55	1
<b>Trichloroethene</b>	<b>0.33</b>	<b>J</b>	1.0	0.20	ug/L			11/08/18 22:55	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 22:55	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 22:55	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 22:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		70 - 130		11/08/18 22:55	1
4-Bromofluorobenzene (Surr)	98		70 - 130		11/08/18 22:55	1
Toluene-d8 (Surr)	106		70 - 130		11/08/18 22:55	1

**Client Sample ID: B-13B**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-19**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 23:22	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 23:22	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 23:22	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 23:22	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 23:22	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-13B**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-19**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 23:22	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 23:22	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 23:22	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 23:22	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 23:22	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 23:22	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 23:22	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 23:22	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 23:22	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 23:22	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 23:22	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 23:22	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 23:22	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 23:22	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 23:22	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 23:22	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 23:22	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 23:22	1
Bromomethane	<0.35 *		1.0	0.35	ug/L			11/08/18 23:22	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 23:22	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 23:22	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 23:22	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 23:22	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 23:22	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 23:22	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 23:22	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 23:22	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 23:22	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 23:22	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 23:22	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 23:22	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 23:22	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 23:22	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 23:22	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 23:22	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
<b>Tetrachloroethene</b>	<b>1.2</b>		1.0	0.14	ug/L			11/08/18 23:22	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-13B**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-19**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 23:22	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 23:22	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 23:22	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 23:22	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 23:22	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 23:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		70 - 130		11/08/18 23:22	1
4-Bromofluorobenzene (Surr)	95		70 - 130		11/08/18 23:22	1
Toluene-d8 (Surr)	107		70 - 130		11/08/18 23:22	1

**Client Sample ID: MW-18A**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-20**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 17:17	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:17	1
1,1,1,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:17	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:17	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 17:17	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 17:17	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 17:17	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 17:17	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 17:17	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 17:17	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 17:17	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 17:17	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 17:17	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 17:17	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 17:17	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 17:17	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 17:17	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 17:17	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 17:17	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 17:17	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 17:17	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 17:17	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 17:17	1
Bromomethane	<0.35		1.0	0.35	ug/L			11/08/18 17:17	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 17:17	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 17:17	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 17:17	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: MW-18A**

**Lab Sample ID: 500-154152-20**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 17:17	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 17:17	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 17:17	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 17:17	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 17:17	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 17:17	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 17:17	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 17:17	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 17:17	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 17:17	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 17:17	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 17:17	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 17:17	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 17:17	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 17:17	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 17:17	1
<b>Trichloroethene</b>	<b>0.63</b>	<b>J</b>	1.0	0.20	ug/L			11/08/18 17:17	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 17:17	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 17:17	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 17:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 130					11/08/18 17:17	1
4-Bromofluorobenzene (Surr)	94		70 - 130					11/08/18 17:17	1
Toluene-d8 (Surr)	93		70 - 130					11/08/18 17:17	1

**Client Sample ID: MW-19A**

**Lab Sample ID: 500-154152-21**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 17:44	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:44	1
1,1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:44	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 17:44	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 17:44	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 17:44	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 17:44	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 17:44	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 17:44	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 17:44	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: MW-19A**

**Lab Sample ID: 500-154152-21**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 17:44	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 17:44	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 17:44	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 17:44	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 17:44	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 17:44	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 17:44	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 17:44	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 17:44	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 17:44	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 17:44	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 17:44	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 17:44	1
Bromomethane	<0.35		1.0	0.35	ug/L			11/08/18 17:44	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 17:44	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 17:44	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 17:44	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 17:44	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 17:44	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 17:44	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 17:44	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 17:44	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 17:44	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 17:44	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 17:44	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 17:44	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 17:44	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 17:44	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 17:44	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 17:44	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 17:44	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 17:44	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 17:44	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 17:44	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 17:44	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 17:44	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: MW-19A**

**Lab Sample ID: 500-154152-21**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 17:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 130					11/08/18 17:44	1
4-Bromofluorobenzene (Surr)	91		70 - 130					11/08/18 17:44	1
Toluene-d8 (Surr)	90		70 - 130					11/08/18 17:44	1

**Client Sample ID: Discharge**

**Lab Sample ID: 500-154152-22**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 18:12	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:12	1
1,1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:12	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:12	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 18:12	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 18:12	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 18:12	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 18:12	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 18:12	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 18:12	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 18:12	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 18:12	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 18:12	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 18:12	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 18:12	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 18:12	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 18:12	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 18:12	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 18:12	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 18:12	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 18:12	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 18:12	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 18:12	1
Bromomethane	<0.35		1.0	0.35	ug/L			11/08/18 18:12	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 18:12	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 18:12	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 18:12	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 18:12	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 18:12	1
<b>cis-1,2-Dichloroethene</b>	<b>1.4</b>		1.0	0.21	ug/L			11/08/18 18:12	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 18:12	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Client Sample ID: Discharge

Date Collected: 10/29/18 00:00

Date Received: 11/01/18 09:50

## Lab Sample ID: 500-154152-22

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 18:12	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 18:12	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 18:12	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 18:12	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 18:12	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 18:12	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 18:12	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 18:12	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 18:12	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
<b>Tetrachloroethene</b>	<b>0.34</b>	<b>J</b>	1.0	0.14	ug/L			11/08/18 18:12	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 18:12	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 18:12	1
<b>Trichloroethene</b>	<b>0.82</b>	<b>J</b>	1.0	0.20	ug/L			11/08/18 18:12	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 18:12	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 18:12	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 18:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		70 - 130		11/08/18 18:12	1
4-Bromofluorobenzene (Surr)	93		70 - 130		11/08/18 18:12	1
Toluene-d8 (Surr)	86		70 - 130		11/08/18 18:12	1

## Client Sample ID: B-1A Dup

Date Collected: 10/29/18 00:00

Date Received: 11/01/18 09:50

## Lab Sample ID: 500-154152-23

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 18:39	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:39	1
1,1,1,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:39	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 18:39	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 18:39	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 18:39	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 18:39	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 18:39	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 18:39	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 18:39	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 18:39	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 18:39	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 18:39	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 18:39	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-1A Dup**

**Lab Sample ID: 500-154152-23**

**Date Collected: 10/29/18 00:00**

**Matrix: Ground Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 18:39	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 18:39	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 18:39	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 18:39	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 18:39	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 18:39	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 18:39	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 18:39	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 18:39	1
Bromomethane	<0.35		1.0	0.35	ug/L			11/08/18 18:39	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 18:39	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 18:39	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 18:39	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 18:39	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 18:39	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 18:39	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 18:39	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 18:39	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 18:39	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 18:39	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 18:39	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 18:39	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 18:39	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 18:39	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 18:39	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 18:39	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 18:39	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 18:39	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 18:39	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 18:39	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 18:39	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 18:39	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 18:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 130		11/08/18 18:39	1
4-Bromofluorobenzene (Surr)	97		70 - 130		11/08/18 18:39	1
Toluene-d8 (Surr)	88		70 - 130		11/08/18 18:39	1

TestAmerica Chicago



# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-154152-24**

**Date Collected: 10/29/18 00:00**

**Matrix: Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 16:49	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 16:49	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 16:49	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 16:49	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 16:49	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 16:49	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 16:49	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 16:49	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 16:49	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 16:49	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 16:49	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 16:49	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 16:49	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 16:49	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 16:49	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 16:49	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 16:49	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 16:49	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 16:49	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 16:49	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 16:49	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 16:49	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 16:49	1
Bromomethane	<0.35		1.0	0.35	ug/L			11/08/18 16:49	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 16:49	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 16:49	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 16:49	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 16:49	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 16:49	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 16:49	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 16:49	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 16:49	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 16:49	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 16:49	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 16:49	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 16:49	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 16:49	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 16:49	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 16:49	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1

TestAmerica Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-154152-24**

**Date Collected: 10/29/18 00:00**

**Matrix: Water**

**Date Received: 11/01/18 09:50**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 16:49	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 16:49	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 16:49	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 16:49	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 16:49	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 16:49	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 16:49	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 16:49	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	94		70 - 130					11/08/18 16:49	1
4-Bromofluorobenzene (Surr)	95		70 - 130					11/08/18 16:49	1
Toluene-d8 (Surr)	88		70 - 130					11/08/18 16:49	1

# Definitions/Glossary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Association Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## GC/MS VOA

### Analysis Batch: 555864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-154152-20	MW-18A	Total/NA	Ground Water	8260B	
500-154152-21	MW-19A	Total/NA	Ground Water	8260B	
500-154152-22	Discharge	Total/NA	Ground Water	8260B	
500-154152-23	B-1A Dup	Total/NA	Ground Water	8260B	
500-154152-24	Trip Blank	Total/NA	Water	8260B	
MB 490-555864/5	Method Blank	Total/NA	Water	8260B	
LCS 490-555864/3	Lab Control Sample	Total/NA	Water	8260B	

### Analysis Batch: 555876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-154152-1	EXW-4	Total/NA	Ground Water	8260B	
500-154152-2	EXW-6	Total/NA	Ground Water	8260B	
500-154152-3	Muni #3	Total/NA	Ground Water	8260B	
500-154152-4	MW-17	Total/NA	Ground Water	8260B	
500-154152-5	MW-18	Total/NA	Ground Water	8260B	
500-154152-6	MW-19	Total/NA	Ground Water	8260B	
500-154152-7	MW-21	Total/NA	Ground Water	8260B	
500-154152-8	MW-21A	Total/NA	Ground Water	8260B	
500-154152-9	B-1	Total/NA	Ground Water	8260B	
500-154152-10	B-1A	Total/NA	Ground Water	8260B	
500-154152-11	B-1B	Total/NA	Ground Water	8260B	
500-154152-12	B-3	Total/NA	Ground Water	8260B	
500-154152-13	B-3A	Total/NA	Ground Water	8260B	
500-154152-14	B-10	Total/NA	Ground Water	8260B	
500-154152-15	B-11	Total/NA	Ground Water	8260B	
500-154152-16	B-12	Total/NA	Ground Water	8260B	
500-154152-17	B-13	Total/NA	Ground Water	8260B	
500-154152-18	B-13A	Total/NA	Ground Water	8260B	
500-154152-19	B-13B	Total/NA	Ground Water	8260B	
MB 490-555876/6	Method Blank	Total/NA	Water	8260B	
LCS 490-555876/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-555876/4	Lab Control Sample Dup	Total/NA	Water	8260B	
500-154152-1 MS	EXW-4	Total/NA	Ground Water	8260B	
500-154152-1 MSD	EXW-4	Total/NA	Ground Water	8260B	

### Analysis Batch: 556217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-154152-6	MW-19	Total/NA	Ground Water	8260B	
MB 490-556217/6	Method Blank	Total/NA	Water	8260B	
LCS 490-556217/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-556217/4	Lab Control Sample Dup	Total/NA	Water	8260B	

# Surrogate Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Ground Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DCA (70-130)	BFB (70-130)	TOL (70-130)
500-154152-1	EXW-4	110	96	108
500-154152-1 MS	EXW-4	109	95	106
500-154152-1 MSD	EXW-4	110	96	103
500-154152-2	EXW-6	113	103	107
500-154152-3	Muni #3	112	102	106
500-154152-4	MW-17	111	103	107
500-154152-5	MW-18	116	102	104
500-154152-6	MW-19	112	102	105
500-154152-6	MW-19	110	102	106
500-154152-7	MW-21	114	103	104
500-154152-8	MW-21A	113	102	105
500-154152-9	B-1	111	101	106
500-154152-10	B-1A	112	105	106
500-154152-11	B-1B	112	104	105
500-154152-12	B-3	115	103	107
500-154152-13	B-3A	116	96	107
500-154152-14	B-10	113	99	105
500-154152-15	B-11	114	101	107
500-154152-16	B-12	113	97	108
500-154152-17	B-13	112	95	107
500-154152-18	B-13A	112	98	106
500-154152-19	B-13B	112	95	107
500-154152-20	MW-18A	92	94	93
500-154152-21	MW-19A	92	91	90
500-154152-22	Discharge	91	93	86
500-154152-23	B-1A Dup	92	97	88

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DCA (70-130)	BFB (70-130)	TOL (70-130)
500-154152-24	Trip Blank	94	95	88
LCS 490-555864/3	Lab Control Sample	88	102	87
LCS 490-555876/3	Lab Control Sample	108	97	108
LCS 490-556217/3	Lab Control Sample	108	96	106
LCSD 490-555876/4	Lab Control Sample Dup	110	98	104
LCSD 490-556217/4	Lab Control Sample Dup	110	98	107
MB 490-555864/5	Method Blank	94	95	87
MB 490-555876/6	Method Blank	112	98	105
MB 490-556217/6	Method Blank	113	96	108

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

TestAmerica Chicago

# Surrogate Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

BFB = 4-Bromofluorobenzene (Surr)  
TOL = Toluene-d8 (Surr)

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# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-555864/5

Matrix: Water

Analysis Batch: 555864

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 14:03	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 14:03	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 14:03	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 14:03	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 14:03	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 14:03	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 14:03	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 14:03	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 14:03	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 14:03	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 14:03	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 14:03	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 14:03	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 14:03	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 14:03	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 14:03	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 14:03	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 14:03	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 14:03	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 14:03	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 14:03	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 14:03	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 14:03	1
Bromomethane	<0.35		1.0	0.35	ug/L			11/08/18 14:03	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 14:03	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 14:03	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 14:03	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 14:03	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 14:03	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 14:03	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 14:03	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 14:03	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 14:03	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 14:03	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 14:03	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 14:03	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 14:03	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 14:03	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 14:03	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1

TestAmerica Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 490-555864/5**

**Matrix: Water**

**Analysis Batch: 555864**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 14:03	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 14:03	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 14:03	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 14:03	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 14:03	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 14:03	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 14:03	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 14:03	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	94		70 - 130		11/08/18 14:03	1
4-Bromofluorobenzene (Surr)	95		70 - 130		11/08/18 14:03	1
Toluene-d8 (Surr)	87		70 - 130		11/08/18 14:03	1

**Lab Sample ID: LCS 490-555864/3**

**Matrix: Water**

**Analysis Batch: 555864**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
1,1,1,2-Tetrachloroethane	20.0	19.2		ug/L		96	70 - 130
1,1,1-Trichloroethane	20.0	20.7		ug/L		103	70 - 135
1,1,2,2-Tetrachloroethane	20.0	19.8		ug/L		99	69 - 131
1,1,2-Trichloroethane	20.0	17.7		ug/L		88	70 - 130
1,1-Dichloroethane	20.0	19.5		ug/L		97	70 - 130
1,1-Dichloroethene	20.0	21.0		ug/L		105	70 - 132
1,1-Dichloropropene	20.0	20.5		ug/L		103	70 - 130
1,2,3-Trichlorobenzene	20.0	22.3		ug/L		112	46 - 150
1,2,3-Trichloropropane	20.0	18.0		ug/L		90	70 - 131
1,2,4-Trichlorobenzene	20.0	21.4		ug/L		107	58 - 147
1,2,4-Trimethylbenzene	20.0	21.6		ug/L		108	70 - 130
1,2-Dibromo-3-Chloropropane	20.0	18.0		ug/L		90	45 - 138
1,2-Dibromoethane	20.0	19.6		ug/L		98	70 - 130
1,2-Dichlorobenzene	20.0	20.0		ug/L		100	70 - 130
1,2-Dichloroethane	20.0	18.5		ug/L		92	70 - 130
1,2-Dichloropropane	20.0	19.5		ug/L		98	70 - 130
1,3,5-Trimethylbenzene	20.0	20.1		ug/L		100	70 - 130
1,3-Dichlorobenzene	20.0	20.7		ug/L		104	70 - 130
1,3-Dichloropropane	20.0	17.6		ug/L		88	70 - 130
1,4-Dichlorobenzene	20.0	19.4		ug/L		97	70 - 130
2,2-Dichloropropane	20.0	20.3		ug/L		102	60 - 143
2-Chlorotoluene	20.0	20.7		ug/L		104	70 - 130
4-Chlorotoluene	20.0	20.9		ug/L		104	70 - 130
Benzene	20.0	21.8		ug/L		109	70 - 130
Bromobenzene	20.0	20.7		ug/L		104	70 - 130

TestAmerica Chicago



# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 490-555864/3**

**Matrix: Water**

**Analysis Batch: 555864**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromochloromethane	20.0	21.3		ug/L		106	70 - 130
Bromodichloromethane	20.0	20.4		ug/L		102	70 - 130
Bromoform	20.0	19.0		ug/L		95	70 - 137
Bromomethane	20.0	20.4		ug/L		102	53 - 150
Carbon tetrachloride	20.0	19.9		ug/L		100	70 - 147
Chlorobenzene	20.0	20.3		ug/L		101	70 - 130
Chloroethane	20.0	20.1		ug/L		101	60 - 138
Chloroform	20.0	20.8		ug/L		104	70 - 130
Chloromethane	20.0	20.7		ug/L		103	33 - 150
cis-1,2-Dichloroethene	20.0	21.1		ug/L		105	70 - 130
cis-1,3-Dichloropropene	20.0	17.8		ug/L		89	70 - 133
Dibromochloromethane	20.0	18.8		ug/L		94	70 - 133
Dibromomethane	20.0	19.2		ug/L		96	70 - 130
Dichlorodifluoromethane	20.0	20.8		ug/L		104	48 - 150
Ethylbenzene	20.0	21.4		ug/L		107	70 - 130
Hexachlorobutadiene	20.0	21.1		ug/L		105	70 - 138
Isopropylbenzene	20.0	21.7		ug/L		108	70 - 131
Methyl tert-butyl ether	20.0	15.0		ug/L		75	70 - 130
Methylene Chloride	20.0	22.1		ug/L		111	70 - 130
Naphthalene	20.0	19.5		ug/L		98	54 - 150
n-Butylbenzene	20.0	19.9		ug/L		100	68 - 137
N-Propylbenzene	20.0	21.4		ug/L		107	70 - 134
p-Isopropyltoluene	20.0	21.2		ug/L		106	66 - 130
sec-Butylbenzene	20.0	21.7		ug/L		109	70 - 135
Styrene	20.0	20.6		ug/L		103	70 - 130
tert-Butylbenzene	20.0	21.3		ug/L		106	70 - 130
Tetrachloroethene	20.0	18.5		ug/L		92	70 - 130
Toluene	20.0	18.8		ug/L		94	70 - 130
trans-1,2-Dichloroethene	20.0	20.1		ug/L		101	70 - 130
trans-1,3-Dichloropropene	20.0	17.0		ug/L		85	63 - 142
Trichloroethene	20.0	20.7		ug/L		104	70 - 130
Trichlorofluoromethane	20.0	20.3		ug/L		101	59 - 150
Vinyl chloride	20.0	21.3		ug/L		107	57 - 137
Xylenes, Total	40.0	42.5		ug/L		106	70 - 132

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		70 - 130
4-Bromofluorobenzene (Surr)	102		70 - 130
Toluene-d8 (Surr)	87		70 - 130

**Lab Sample ID: MB 490-555876/6**

**Matrix: Water**

**Analysis Batch: 555876**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/08/18 14:30	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 14:30	1
1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/08/18 14:30	1

TestAmerica Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 490-555876/6**  
**Matrix: Water**  
**Analysis Batch: 555876**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/08/18 14:30	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/08/18 14:30	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/08/18 14:30	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/08/18 14:30	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/08/18 14:30	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/08/18 14:30	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/08/18 14:30	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/08/18 14:30	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/08/18 14:30	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/08/18 14:30	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/08/18 14:30	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/08/18 14:30	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 14:30	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/08/18 14:30	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/08/18 14:30	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/08/18 14:30	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
Benzene	<0.20		1.0	0.20	ug/L			11/08/18 14:30	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/08/18 14:30	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/08/18 14:30	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
Bromoform	<0.29		1.0	0.29	ug/L			11/08/18 14:30	1
Bromomethane	<0.35		1.0	0.35	ug/L			11/08/18 14:30	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/08/18 14:30	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/08/18 14:30	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/08/18 14:30	1
Chloroform	<0.23		1.0	0.23	ug/L			11/08/18 14:30	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/08/18 14:30	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/08/18 14:30	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/08/18 14:30	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/08/18 14:30	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/08/18 14:30	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/08/18 14:30	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/08/18 14:30	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/08/18 14:30	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/08/18 14:30	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/08/18 14:30	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/08/18 14:30	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
Styrene	<0.28		1.0	0.28	ug/L			11/08/18 14:30	1

TestAmerica Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 490-555876/6**  
**Matrix: Water**  
**Analysis Batch: 555876**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/08/18 14:30	1
Toluene	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/08/18 14:30	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/08/18 14:30	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/08/18 14:30	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/08/18 14:30	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/08/18 14:30	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/08/18 14:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		70 - 130		11/08/18 14:30	1
4-Bromofluorobenzene (Surr)	98		70 - 130		11/08/18 14:30	1
Toluene-d8 (Surr)	105		70 - 130		11/08/18 14:30	1

**Lab Sample ID: LCS 490-555876/3**  
**Matrix: Water**  
**Analysis Batch: 555876**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	20.0	19.3		ug/L		96	70 - 130
1,1,1-Trichloroethane	20.0	18.7		ug/L		94	70 - 135
1,1,1,2,2-Tetrachloroethane	20.0	18.5		ug/L		93	69 - 131
1,1,1,2-Trichloroethane	20.0	19.0		ug/L		95	70 - 130
1,1-Dichloroethane	20.0	19.5		ug/L		98	70 - 130
1,1-Dichloroethene	20.0	19.2		ug/L		96	70 - 132
1,1-Dichloropropene	20.0	17.7		ug/L		89	70 - 130
1,2,3-Trichlorobenzene	20.0	17.5		ug/L		88	46 - 150
1,2,3-Trichloropropane	20.0	21.2		ug/L		106	70 - 131
1,2,4-Trichlorobenzene	20.0	17.1		ug/L		86	58 - 147
1,2,4-Trimethylbenzene	20.0	17.4		ug/L		87	70 - 130
1,2-Dibromo-3-Chloropropane	20.0	14.7		ug/L		73	45 - 138
1,2-Dibromoethane	20.0	19.5		ug/L		98	70 - 130
1,2-Dichlorobenzene	20.0	18.0		ug/L		90	70 - 130
1,2-Dichloroethane	20.0	19.6		ug/L		98	70 - 130
1,2-Dichloropropane	20.0	16.4		ug/L		82	70 - 130
1,3,5-Trimethylbenzene	20.0	18.3		ug/L		91	70 - 130
1,3-Dichlorobenzene	20.0	18.1		ug/L		91	70 - 130
1,3-Dichloropropane	20.0	18.7		ug/L		94	70 - 130
1,4-Dichlorobenzene	20.0	18.5		ug/L		93	70 - 130
2,2-Dichloropropane	20.0	17.5		ug/L		87	60 - 143
2-Chlorotoluene	20.0	17.4		ug/L		87	70 - 130
4-Chlorotoluene	20.0	18.0		ug/L		90	70 - 130
Benzene	20.0	16.8		ug/L		84	70 - 130
Bromobenzene	20.0	17.1		ug/L		85	70 - 130
Bromochloromethane	20.0	19.3		ug/L		97	70 - 130
Bromodichloromethane	20.0	17.9		ug/L		89	70 - 130
Bromoform	20.0	16.8		ug/L		84	70 - 137

TestAmerica Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 490-555876/3**

**Matrix: Water**

**Analysis Batch: 555876**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	20.0	32.5	*	ug/L		162	53 - 150
Carbon tetrachloride	20.0	19.1		ug/L		96	70 - 147
Chlorobenzene	20.0	18.5		ug/L		93	70 - 130
Chloroethane	20.0	21.3		ug/L		107	60 - 138
Chloroform	20.0	19.4		ug/L		97	70 - 130
Chloromethane	20.0	21.4		ug/L		107	33 - 150
cis-1,2-Dichloroethene	20.0	18.7		ug/L		93	70 - 130
cis-1,3-Dichloropropene	20.0	18.2		ug/L		91	70 - 133
Dibromochloromethane	20.0	18.7		ug/L		94	70 - 133
Dibromomethane	20.0	17.9		ug/L		90	70 - 130
Dichlorodifluoromethane	20.0	21.7		ug/L		109	48 - 150
Ethylbenzene	20.0	18.0		ug/L		90	70 - 130
Hexachlorobutadiene	20.0	17.9		ug/L		89	70 - 138
Isopropylbenzene	20.0	18.1		ug/L		91	70 - 131
Methyl tert-butyl ether	20.0	20.4		ug/L		102	70 - 130
Methylene Chloride	20.0	18.8		ug/L		94	70 - 130
Naphthalene	20.0	16.6		ug/L		83	54 - 150
n-Butylbenzene	20.0	16.5		ug/L		83	68 - 137
N-Propylbenzene	20.0	17.4		ug/L		87	70 - 134
p-Isopropyltoluene	20.0	17.8		ug/L		89	66 - 130
sec-Butylbenzene	20.0	17.2		ug/L		86	70 - 135
Styrene	20.0	17.6		ug/L		88	70 - 130
tert-Butylbenzene	20.0	17.6		ug/L		88	70 - 130
Tetrachloroethene	20.0	19.5		ug/L		98	70 - 130
Toluene	20.0	19.0		ug/L		95	70 - 130
trans-1,2-Dichloroethene	20.0	19.2		ug/L		96	70 - 130
trans-1,3-Dichloropropene	20.0	17.9		ug/L		90	63 - 142
Trichloroethene	20.0	17.8		ug/L		89	70 - 130
Trichlorofluoromethane	20.0	25.5		ug/L		127	59 - 150
Vinyl chloride	20.0	21.7		ug/L		108	57 - 137
Xylenes, Total	40.0	36.6		ug/L		92	70 - 132

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		70 - 130
4-Bromofluorobenzene (Surr)	97		70 - 130
Toluene-d8 (Surr)	108		70 - 130

**Lab Sample ID: LCSD 490-555876/4**

**Matrix: Water**

**Analysis Batch: 555876**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	20.0	18.2		ug/L		91	70 - 130	6	13
1,1,1-Trichloroethane	20.0	17.1		ug/L		86	70 - 135	9	15
1,1,2,2-Tetrachloroethane	20.0	17.7		ug/L		88	69 - 131	5	15
1,1,2-Trichloroethane	20.0	18.7		ug/L		93	70 - 130	2	13
1,1-Dichloroethane	20.0	17.8		ug/L		89	70 - 130	9	17
1,1-Dichloroethene	20.0	18.4		ug/L		92	70 - 132	4	20

TestAmerica Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-555876/4

Matrix: Water

Analysis Batch: 555876

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloropropene	20.0	17.2		ug/L		86	70 - 130	3	16
1,2,3-Trichlorobenzene	20.0	16.1		ug/L		80	46 - 150	9	16
1,2,3-Trichloropropane	20.0	20.9		ug/L		104	70 - 131	2	14
1,2,4-Trichlorobenzene	20.0	17.7		ug/L		88	58 - 147	3	15
1,2,4-Trimethylbenzene	20.0	17.2		ug/L		86	70 - 130	1	13
1,2-Dibromo-3-Chloropropane	20.0	14.6		ug/L		73	45 - 138	1	19
1,2-Dibromoethane	20.0	19.1		ug/L		95	70 - 130	2	13
1,2-Dichlorobenzene	20.0	17.9		ug/L		89	70 - 130	1	12
1,2-Dichloroethane	20.0	18.2		ug/L		91	70 - 130	8	13
1,2-Dichloropropane	20.0	15.3		ug/L		76	70 - 130	7	15
1,3,5-Trimethylbenzene	20.0	17.4		ug/L		87	70 - 130	5	14
1,3-Dichlorobenzene	20.0	17.9		ug/L		90	70 - 130	1	13
1,3-Dichloropropane	20.0	18.5		ug/L		92	70 - 130	2	12
1,4-Dichlorobenzene	20.0	17.7		ug/L		88	70 - 130	5	12
2,2-Dichloropropane	20.0	15.4		ug/L		77	60 - 143	12	20
2-Chlorotoluene	20.0	16.9		ug/L		85	70 - 130	3	15
4-Chlorotoluene	20.0	16.6		ug/L		83	70 - 130	8	15
Benzene	20.0	15.6		ug/L		78	70 - 130	8	12
Bromobenzene	20.0	16.1		ug/L		80	70 - 130	6	16
Bromochloromethane	20.0	18.5		ug/L		93	70 - 130	4	16
Bromodichloromethane	20.0	17.4		ug/L		87	70 - 130	3	14
Bromoform	20.0	16.6		ug/L		83	70 - 137	1	14
Bromomethane	20.0	30.8	*	ug/L		154	53 - 150	5	19
Carbon tetrachloride	20.0	17.2		ug/L		86	70 - 147	10	16
Chlorobenzene	20.0	17.6		ug/L		88	70 - 130	5	12
Chloroethane	20.0	20.8		ug/L		104	60 - 138	3	15
Chloroform	20.0	17.4		ug/L		87	70 - 130	11	14
Chloromethane	20.0	21.2		ug/L		106	33 - 150	1	20
cis-1,2-Dichloroethene	20.0	17.4		ug/L		87	70 - 130	7	15
cis-1,3-Dichloropropene	20.0	17.7		ug/L		89	70 - 133	2	15
Dibromochloromethane	20.0	17.5		ug/L		88	70 - 133	7	13
Dibromomethane	20.0	17.8		ug/L		89	70 - 130	1	14
Dichlorodifluoromethane	20.0	20.8		ug/L		104	48 - 150	4	16
Ethylbenzene	20.0	17.1		ug/L		86	70 - 130	5	12
Hexachlorobutadiene	20.0	17.6		ug/L		88	70 - 138	1	16
Isopropylbenzene	20.0	17.1		ug/L		85	70 - 131	6	13
Methyl tert-butyl ether	20.0	19.4		ug/L		97	70 - 130	5	16
Methylene Chloride	20.0	17.9		ug/L		89	70 - 130	5	15
Naphthalene	20.0	16.0		ug/L		80	54 - 150	4	15
n-Butylbenzene	20.0	16.8		ug/L		84	68 - 137	2	14
N-Propylbenzene	20.0	16.5		ug/L		82	70 - 134	5	14
p-Isopropyltoluene	20.0	17.1		ug/L		86	66 - 130	4	13
sec-Butylbenzene	20.0	16.4		ug/L		82	70 - 135	5	14
Styrene	20.0	17.1		ug/L		85	70 - 130	3	12
tert-Butylbenzene	20.0	16.9		ug/L		85	70 - 130	4	14
Tetrachloroethene	20.0	18.7		ug/L		93	70 - 130	5	17
Toluene	20.0	17.8		ug/L		89	70 - 130	7	13
trans-1,2-Dichloroethene	20.0	18.2		ug/L		91	70 - 130	5	15

TestAmerica Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 490-555876/4**  
**Matrix: Water**  
**Analysis Batch: 555876**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,3-Dichloropropene	20.0	17.1		ug/L		85	63 - 142	5	13
Trichloroethene	20.0	16.4		ug/L		82	70 - 130	8	14
Trichlorofluoromethane	20.0	24.4		ug/L		122	59 - 150	4	22
Vinyl chloride	20.0	20.4		ug/L		102	57 - 137	6	15
Xylenes, Total	40.0	35.3		ug/L		88	70 - 132	4	11

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	110		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130
Toluene-d8 (Surr)	104		70 - 130

**Lab Sample ID: 500-154152-1 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 555876**

**Client Sample ID: EXW-4**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	<0.15		20.0	20.2		ug/L		101	70 - 131
1,1,1-Trichloroethane	<0.19		20.0	20.3		ug/L		102	68 - 144
1,1,2,2-Tetrachloroethane	<0.19		20.0	16.9		ug/L		84	56 - 145
1,1,2-Trichloroethane	<0.19		20.0	19.0		ug/L		95	70 - 130
1,1-Dichloroethane	<0.24		20.0	20.1		ug/L		100	61 - 139
1,1-Dichloroethene	<0.25		20.0	20.8		ug/L		104	54 - 150
1,1-Dichloropropene	<0.20		20.0	20.2		ug/L		101	54 - 150
1,2,3-Trichlorobenzene	<0.23		20.0	14.8		ug/L		74	36 - 150
1,2,3-Trichloropropane	<0.23		20.0	20.0		ug/L		100	65 - 131
1,2,4-Trichlorobenzene	<0.20		20.0	17.1		ug/L		86	47 - 147
1,2,4-Trimethylbenzene	<0.17		20.0	18.8		ug/L		94	64 - 136
1,2-Dibromo-3-Chloropropane	<0.94		20.0	15.1		ug/L		76	38 - 138
1,2-Dibromoethane	<0.21		20.0	19.7		ug/L		99	65 - 137
1,2-Dichlorobenzene	<0.19		20.0	19.8		ug/L		99	70 - 130
1,2-Dichloroethane	<0.20		20.0	20.1		ug/L		100	64 - 136
1,2-Dichloropropane	<0.25		20.0	17.3		ug/L		87	67 - 130
1,3,5-Trimethylbenzene	<0.17		20.0	19.6		ug/L		98	69 - 139
1,3-Dichlorobenzene	<0.18		20.0	19.8		ug/L		99	68 - 131
1,3-Dichloropropane	<0.19		20.0	18.9		ug/L		95	70 - 130
1,4-Dichlorobenzene	<0.17		20.0	19.1		ug/L		96	70 - 130
2,2-Dichloropropane	<0.16		20.0	17.8		ug/L		89	50 - 146
2-Chlorotoluene	<0.18		20.0	19.0		ug/L		95	67 - 138
4-Chlorotoluene	<0.17		20.0	18.3		ug/L		92	69 - 138
Benzene	<0.20		20.0	17.3		ug/L		86	55 - 147
Bromobenzene	<0.21		20.0	17.6		ug/L		88	60 - 133
Bromochloromethane	<0.15		20.0	21.0		ug/L		105	59 - 132
Bromodichloromethane	<0.17		20.0	18.8		ug/L		94	70 - 140
Bromoform	<0.29		20.0	16.2		ug/L		81	53 - 150
Bromomethane	<0.35 * F1		20.0	29.6		ug/L		148	30 - 150
Carbon tetrachloride	<0.18		20.0	21.0		ug/L		105	56 - 150
Chlorobenzene	<0.18		20.0	19.5		ug/L		98	70 - 130
Chloroethane	<0.36		20.0	21.4		ug/L		107	58 - 141

TestAmerica Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-154152-1 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 555876**

**Client Sample ID: EXW-4**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	<0.23		20.0	21.1		ug/L		105	66 - 138
Chloromethane	<0.36		20.0	21.7		ug/L		108	10 - 150
cis-1,2-Dichloroethene	1.6		20.0	22.0		ug/L		102	68 - 131
cis-1,3-Dichloropropene	<0.17		20.0	18.7		ug/L		93	70 - 133
Dibromochloromethane	<0.25		20.0	19.6		ug/L		98	66 - 140
Dibromomethane	<0.45		20.0	18.6		ug/L		93	70 - 130
Dichlorodifluoromethane	<0.17		20.0	21.9		ug/L		109	10 - 150
Ethylbenzene	<0.19		20.0	19.0		ug/L		95	65 - 139
Hexachlorobutadiene	<0.38		20.0	20.7		ug/L		104	61 - 141
Isopropylbenzene	<0.33		20.0	18.8		ug/L		94	70 - 137
Methyl tert-butyl ether	<0.17		20.0	20.4		ug/L		102	55 - 141
Methylene Chloride	<1.0		20.0	19.5		ug/L		97	64 - 130
Naphthalene	<0.21		20.0	14.0		ug/L		70	32 - 150
n-Butylbenzene	<0.24		20.0	19.3		ug/L		97	61 - 141
N-Propylbenzene	<0.17		20.0	19.0		ug/L		95	53 - 150
p-Isopropyltoluene	<0.17		20.0	19.6		ug/L		98	66 - 137
sec-Butylbenzene	<0.17		20.0	19.4		ug/L		97	55 - 136
Styrene	<0.28		20.0	18.6		ug/L		93	70 - 130
tert-Butylbenzene	<0.17		20.0	19.6		ug/L		98	70 - 138
Tetrachloroethene	0.22	J	20.0	22.3		ug/L		110	57 - 138
Toluene	<0.17		20.0	20.3		ug/L		102	64 - 136
trans-1,2-Dichloroethene	<0.23		20.0	20.4		ug/L		102	59 - 143
trans-1,3-Dichloropropene	<0.17		20.0	18.1		ug/L		90	63 - 142
Trichloroethene	0.92	J	20.0	21.1		ug/L		101	63 - 135
Trichlorofluoromethane	<0.21		20.0	25.9		ug/L		129	44 - 150
Vinyl chloride	<0.18		20.0	21.0		ug/L		105	57 - 150
Xylenes, Total	<0.58		40.0	38.8		ug/L		97	69 - 132

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	109		70 - 130
4-Bromofluorobenzene (Surr)	95		70 - 130
Toluene-d8 (Surr)	106		70 - 130

**Lab Sample ID: 500-154152-1 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 555876**

**Client Sample ID: EXW-4**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	<0.15		20.0	20.4		ug/L		102	70 - 131	1	16
1,1,1-Trichloroethane	<0.19		20.0	21.5		ug/L		107	68 - 144	5	17
1,1,2,2-Tetrachloroethane	<0.19		20.0	17.3		ug/L		86	56 - 145	2	19
1,1,2-Trichloroethane	<0.19		20.0	19.1		ug/L		95	70 - 130	0	18
1,1-Dichloroethane	<0.24		20.0	21.1		ug/L		105	61 - 139	5	23
1,1-Dichloroethene	<0.25		20.0	22.7		ug/L		114	54 - 150	9	24
1,1-Dichloropropene	<0.20		20.0	20.2		ug/L		101	54 - 150	0	24
1,2,3-Trichlorobenzene	<0.23		20.0	18.1		ug/L		91	36 - 150	20	43
1,2,3-Trichloropropane	<0.23		20.0	19.8		ug/L		99	65 - 131	1	19
1,2,4-Trichlorobenzene	<0.20		20.0	18.1		ug/L		90	47 - 147	5	24

TestAmerica Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-154152-1 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 555876**

**Client Sample ID: EXW-4**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trimethylbenzene	<0.17		20.0	19.7		ug/L		99	64 - 136	5	18
1,2-Dibromo-3-Chloropropane	<0.94		20.0	15.1		ug/L		76	38 - 138	0	26
1,2-Dibromoethane	<0.21		20.0	18.8		ug/L		94	65 - 137	5	21
1,2-Dichlorobenzene	<0.19		20.0	19.6		ug/L		98	70 - 130	1	15
1,2-Dichloroethane	<0.20		20.0	20.8		ug/L		104	64 - 136	3	22
1,2-Dichloropropane	<0.25		20.0	18.1		ug/L		90	67 - 130	4	19
1,3,5-Trimethylbenzene	<0.17		20.0	20.2		ug/L		101	69 - 139	3	17
1,3-Dichlorobenzene	<0.18		20.0	20.1		ug/L		101	68 - 131	2	14
1,3-Dichloropropane	<0.19		20.0	19.0		ug/L		95	70 - 130	1	17
1,4-Dichlorobenzene	<0.17		20.0	20.1		ug/L		100	70 - 130	5	14
2,2-Dichloropropane	<0.16		20.0	18.5		ug/L		92	50 - 146	3	20
2-Chlorotoluene	<0.18		20.0	19.1		ug/L		95	67 - 138	0	17
4-Chlorotoluene	<0.17		20.0	19.6		ug/L		98	69 - 138	7	15
Benzene	<0.20		20.0	18.5		ug/L		93	55 - 147	7	22
Bromobenzene	<0.21		20.0	17.8		ug/L		89	60 - 133	1	18
Bromochloromethane	<0.15		20.0	20.3		ug/L		102	59 - 132	3	21
Bromodichloromethane	<0.17		20.0	19.3		ug/L		97	70 - 140	3	196
Bromoform	<0.29		20.0	15.7		ug/L		79	53 - 150	3	20
Bromomethane	<0.35	* F1	20.0	31.0	F1	ug/L		155	30 - 150	4	44
Carbon tetrachloride	<0.18		20.0	20.9		ug/L		105	56 - 150	0	18
Chlorobenzene	<0.18		20.0	20.3		ug/L		102	70 - 130	4	15
Chloroethane	<0.36		20.0	22.4		ug/L		112	58 - 141	4	31
Chloroform	<0.23		20.0	20.6		ug/L		103	66 - 138	2	21
Chloromethane	<0.36		20.0	21.8		ug/L		109	10 - 150	1	43
cis-1,2-Dichloroethene	1.6		20.0	22.2		ug/L		103	68 - 131	1	21
cis-1,3-Dichloropropene	<0.17		20.0	19.2		ug/L		96	70 - 133	3	19
Dibromochloromethane	<0.25		20.0	19.3		ug/L		96	66 - 140	1	19
Dibromomethane	<0.45		20.0	18.5		ug/L		92	70 - 130	1	19
Dichlorodifluoromethane	<0.17		20.0	19.3		ug/L		97	10 - 150	12	50
Ethylbenzene	<0.19		20.0	19.6		ug/L		98	65 - 139	3	18
Hexachlorobutadiene	<0.38		20.0	21.3		ug/L		107	61 - 141	3	26
Isopropylbenzene	<0.33		20.0	19.2		ug/L		96	70 - 137	2	17
Methyl tert-butyl ether	<0.17		20.0	19.8		ug/L		99	55 - 141	3	24
Methylene Chloride	<1.0		20.0	19.3		ug/L		97	64 - 130	1	22
Naphthalene	<0.21		20.0	15.6		ug/L		78	32 - 150	11	40
n-Butylbenzene	<0.24		20.0	19.1		ug/L		95	61 - 141	1	17
N-Propylbenzene	<0.17		20.0	19.5		ug/L		97	53 - 150	3	18
p-Isopropyltoluene	<0.17		20.0	20.0		ug/L		100	66 - 137	2	16
sec-Butylbenzene	<0.17		20.0	19.6		ug/L		98	55 - 136	1	50
Styrene	<0.28		20.0	18.4		ug/L		92	70 - 130	2	16
tert-Butylbenzene	<0.17		20.0	19.9		ug/L		99	70 - 138	1	17
Tetrachloroethene	0.22	J	20.0	22.0		ug/L		109	57 - 138	1	17
Toluene	<0.17		20.0	20.6		ug/L		103	64 - 136	1	18
trans-1,2-Dichloroethene	<0.23		20.0	21.1		ug/L		106	59 - 143	4	25
trans-1,3-Dichloropropene	<0.17		20.0	18.1		ug/L		90	63 - 142	0	18
Trichloroethene	0.92	J	20.0	22.0		ug/L		105	63 - 135	4	17
Trichlorofluoromethane	<0.21		20.0	23.9		ug/L		120	44 - 150	8	32
Vinyl chloride	<0.18		20.0	22.3		ug/L		112	57 - 150	6	37

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# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-154152-1 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 555876**

**Client Sample ID: EXW-4**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Xylenes, Total	<0.58		40.0	38.5		ug/L		96	69 - 132	1	17
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>MSD</b>	<b>Limits</b>							
1,2-Dichloroethane-d4 (Surr)	110			70 - 130							
4-Bromofluorobenzene (Surr)	96			70 - 130							
Toluene-d8 (Surr)	103			70 - 130							

**Lab Sample ID: MB 490-556217/6**  
**Matrix: Water**  
**Analysis Batch: 556217**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.15		1.0	0.15	ug/L			11/09/18 14:18	1
1,1,1-Trichloroethane	<0.19		1.0	0.19	ug/L			11/09/18 14:18	1
1,1,1,2,2-Tetrachloroethane	<0.19		1.0	0.19	ug/L			11/09/18 14:18	1
1,1,2-Trichloroethane	<0.19		1.0	0.19	ug/L			11/09/18 14:18	1
1,1-Dichloroethane	<0.24		1.0	0.24	ug/L			11/09/18 14:18	1
1,1-Dichloroethene	<0.25		1.0	0.25	ug/L			11/09/18 14:18	1
1,1-Dichloropropene	<0.20		1.0	0.20	ug/L			11/09/18 14:18	1
1,2,3-Trichlorobenzene	<0.23		1.0	0.23	ug/L			11/09/18 14:18	1
1,2,3-Trichloropropane	<0.23		1.0	0.23	ug/L			11/09/18 14:18	1
1,2,4-Trichlorobenzene	<0.20		1.0	0.20	ug/L			11/09/18 14:18	1
1,2,4-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
1,2-Dibromo-3-Chloropropane	<0.94		10	0.94	ug/L			11/09/18 14:18	1
1,2-Dibromoethane	<0.21		1.0	0.21	ug/L			11/09/18 14:18	1
1,2-Dichlorobenzene	<0.19		1.0	0.19	ug/L			11/09/18 14:18	1
1,2-Dichloroethane	<0.20		1.0	0.20	ug/L			11/09/18 14:18	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			11/09/18 14:18	1
1,3,5-Trimethylbenzene	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
1,3-Dichlorobenzene	<0.18		1.0	0.18	ug/L			11/09/18 14:18	1
1,3-Dichloropropane	<0.19		1.0	0.19	ug/L			11/09/18 14:18	1
1,4-Dichlorobenzene	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
2,2-Dichloropropane	<0.16		1.0	0.16	ug/L			11/09/18 14:18	1
2-Chlorotoluene	<0.18		1.0	0.18	ug/L			11/09/18 14:18	1
4-Chlorotoluene	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
Benzene	<0.20		1.0	0.20	ug/L			11/09/18 14:18	1
Bromobenzene	<0.21		1.0	0.21	ug/L			11/09/18 14:18	1
Bromochloromethane	<0.15		1.0	0.15	ug/L			11/09/18 14:18	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
Bromoform	<0.29		1.0	0.29	ug/L			11/09/18 14:18	1
Bromomethane	<0.35		1.0	0.35	ug/L			11/09/18 14:18	1
Carbon tetrachloride	<0.18		1.0	0.18	ug/L			11/09/18 14:18	1
Chlorobenzene	<0.18		1.0	0.18	ug/L			11/09/18 14:18	1
Chloroethane	<0.36		1.0	0.36	ug/L			11/09/18 14:18	1
Chloroform	<0.23		1.0	0.23	ug/L			11/09/18 14:18	1
Chloromethane	<0.36		1.0	0.36	ug/L			11/09/18 14:18	1
cis-1,2-Dichloroethene	<0.21		1.0	0.21	ug/L			11/09/18 14:18	1
cis-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1

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# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 490-556217/6**

**Matrix: Water**

**Analysis Batch: 556217**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dibromochloromethane	<0.25		1.0	0.25	ug/L			11/09/18 14:18	1
Dibromomethane	<0.45		1.0	0.45	ug/L			11/09/18 14:18	1
Dichlorodifluoromethane	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
Ethylbenzene	<0.19		1.0	0.19	ug/L			11/09/18 14:18	1
Hexachlorobutadiene	<0.38		2.0	0.38	ug/L			11/09/18 14:18	1
Isopropyl ether	<0.17		2.0	0.17	ug/L			11/09/18 14:18	1
Isopropylbenzene	<0.33		1.0	0.33	ug/L			11/09/18 14:18	1
Methyl tert-butyl ether	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
Methylene Chloride	<1.0		5.0	1.0	ug/L			11/09/18 14:18	1
Naphthalene	<0.21		5.0	0.21	ug/L			11/09/18 14:18	1
n-Butylbenzene	<0.24		1.0	0.24	ug/L			11/09/18 14:18	1
N-Propylbenzene	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
sec-Butylbenzene	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
Styrene	<0.28		1.0	0.28	ug/L			11/09/18 14:18	1
tert-Butylbenzene	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
Tetrachloroethene	<0.14		1.0	0.14	ug/L			11/09/18 14:18	1
Toluene	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
trans-1,2-Dichloroethene	<0.23		1.0	0.23	ug/L			11/09/18 14:18	1
trans-1,3-Dichloropropene	<0.17		1.0	0.17	ug/L			11/09/18 14:18	1
Trichloroethene	<0.20		1.0	0.20	ug/L			11/09/18 14:18	1
Trichlorofluoromethane	<0.21		1.0	0.21	ug/L			11/09/18 14:18	1
Vinyl chloride	<0.18		1.0	0.18	ug/L			11/09/18 14:18	1
Xylenes, Total	<0.58		3.0	0.58	ug/L			11/09/18 14:18	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	113		70 - 130		11/09/18 14:18	1
4-Bromofluorobenzene (Surr)	96		70 - 130		11/09/18 14:18	1
Toluene-d8 (Surr)	108		70 - 130		11/09/18 14:18	1

**Lab Sample ID: LCS 490-556217/3**

**Matrix: Water**

**Analysis Batch: 556217**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	19.5		ug/L		98	70 - 135
1,1,2,2-Tetrachloroethane	20.0	17.3		ug/L		87	69 - 131
1,1,2-Trichloroethane	20.0	19.5		ug/L		97	70 - 130
1,1-Dichloroethane	20.0	20.2		ug/L		101	70 - 130
1,1-Dichloroethene	20.0	20.1		ug/L		101	70 - 132
1,1-Dichloropropene	20.0	18.7		ug/L		94	70 - 130
1,2,3-Trichlorobenzene	20.0	18.1		ug/L		90	46 - 150
1,2,3-Trichloropropane	20.0	20.2		ug/L		101	70 - 131
1,2,4-Trichlorobenzene	20.0	18.4		ug/L		92	58 - 147
1,2,4-Trimethylbenzene	20.0	18.9		ug/L		95	70 - 130
1,2-Dibromo-3-Chloropropane	20.0	13.9		ug/L		70	45 - 138
1,2-Dibromoethane	20.0	19.9		ug/L		100	70 - 130

TestAmerica Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-556217/3

Matrix: Water

Analysis Batch: 556217

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	20.0	19.7		ug/L		99	70 - 130
1,2-Dichloroethane	20.0	20.2		ug/L		101	70 - 130
1,2-Dichloropropane	20.0	17.7		ug/L		89	70 - 130
1,3,5-Trimethylbenzene	20.0	19.3		ug/L		97	70 - 130
1,3-Dichlorobenzene	20.0	19.6		ug/L		98	70 - 130
1,3-Dichloropropane	20.0	19.5		ug/L		97	70 - 130
1,4-Dichlorobenzene	20.0	19.3		ug/L		97	70 - 130
2,2-Dichloropropane	20.0	18.6		ug/L		93	60 - 143
2-Chlorotoluene	20.0	18.5		ug/L		93	70 - 130
4-Chlorotoluene	20.0	19.3		ug/L		97	70 - 130
Benzene	20.0	18.3		ug/L		92	70 - 130
Bromobenzene	20.0	17.9		ug/L		90	70 - 130
Bromochloromethane	20.0	21.1		ug/L		105	70 - 130
Bromodichloromethane	20.0	19.1		ug/L		96	70 - 130
Bromoform	20.0	16.9		ug/L		84	70 - 137
Bromomethane	20.0	34.8	*	ug/L		174	53 - 150
Carbon tetrachloride	20.0	19.7		ug/L		99	70 - 147
Chlorobenzene	20.0	19.8		ug/L		99	70 - 130
Chloroethane	20.0	23.1		ug/L		116	60 - 138
Chloroform	20.0	20.7		ug/L		103	70 - 130
Chloromethane	20.0	22.6		ug/L		113	33 - 150
cis-1,2-Dichloroethene	20.0	20.6		ug/L		103	70 - 130
cis-1,3-Dichloropropene	20.0	19.4		ug/L		97	70 - 133
Dibromochloromethane	20.0	19.6		ug/L		98	70 - 133
Dibromomethane	20.0	19.2		ug/L		96	70 - 130
Dichlorodifluoromethane	20.0	23.4		ug/L		117	48 - 150
Ethylbenzene	20.0	19.0		ug/L		95	70 - 130
Hexachlorobutadiene	20.0	21.3		ug/L		107	70 - 138
Isopropylbenzene	20.0	18.9		ug/L		95	70 - 131
Methyl tert-butyl ether	20.0	20.3		ug/L		101	70 - 130
Methylene Chloride	20.0	20.2		ug/L		101	70 - 130
Naphthalene	20.0	16.0		ug/L		80	54 - 150
n-Butylbenzene	20.0	18.8		ug/L		94	68 - 137
N-Propylbenzene	20.0	18.3		ug/L		91	70 - 134
p-Isopropyltoluene	20.0	19.2		ug/L		96	66 - 130
sec-Butylbenzene	20.0	18.8		ug/L		94	70 - 135
Styrene	20.0	19.2		ug/L		96	70 - 130
tert-Butylbenzene	20.0	19.0		ug/L		95	70 - 130
Tetrachloroethene	20.0	21.5		ug/L		108	70 - 130
Toluene	20.0	20.2		ug/L		101	70 - 130
trans-1,2-Dichloroethene	20.0	20.9		ug/L		104	70 - 130
trans-1,3-Dichloropropene	20.0	18.7		ug/L		93	63 - 142
Trichloroethene	20.0	18.7		ug/L		94	70 - 130
Trichlorofluoromethane	20.0	26.5		ug/L		133	59 - 150
Vinyl chloride	20.0	22.2		ug/L		111	57 - 137
Xylenes, Total	40.0	39.5		ug/L		99	70 - 132

TestAmerica Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 490-556217/3**  
**Matrix: Water**  
**Analysis Batch: 556217**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	108		70 - 130
4-Bromofluorobenzene (Surr)	96		70 - 130
Toluene-d8 (Surr)	106		70 - 130

**Lab Sample ID: LCSD 490-556217/4**  
**Matrix: Water**  
**Analysis Batch: 556217**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	20.0	20.6		ug/L		103	70 - 130	0	13
1,1,1-Trichloroethane	20.0	20.9		ug/L		104	70 - 135	7	15
1,1,2,2-Tetrachloroethane	20.0	17.7		ug/L		89	69 - 131	2	15
1,1,2-Trichloroethane	20.0	19.6		ug/L		98	70 - 130	1	13
1,1-Dichloroethane	20.0	21.0		ug/L		105	70 - 130	3	17
1,1-Dichloroethene	20.0	20.7		ug/L		103	70 - 132	3	20
1,1-Dichloropropene	20.0	20.3		ug/L		102	70 - 130	8	16
1,2,3-Trichlorobenzene	20.0	19.3		ug/L		96	46 - 150	6	16
1,2,3-Trichloropropane	20.0	21.3		ug/L		107	70 - 131	5	14
1,2,4-Trichlorobenzene	20.0	19.1		ug/L		95	58 - 147	4	15
1,2,4-Trimethylbenzene	20.0	20.0		ug/L		100	70 - 130	6	13
1,2-Dibromo-3-Chloropropane	20.0	15.2		ug/L		76	45 - 138	9	19
1,2-Dibromoethane	20.0	19.8		ug/L		99	70 - 130	1	13
1,2-Dichlorobenzene	20.0	20.0		ug/L		100	70 - 130	2	12
1,2-Dichloroethane	20.0	21.3		ug/L		107	70 - 130	5	13
1,2-Dichloropropane	20.0	18.1		ug/L		91	70 - 130	2	15
1,3,5-Trimethylbenzene	20.0	19.8		ug/L		99	70 - 130	3	14
1,3-Dichlorobenzene	20.0	20.3		ug/L		101	70 - 130	4	13
1,3-Dichloropropane	20.0	20.4		ug/L		102	70 - 130	5	12
1,4-Dichlorobenzene	20.0	20.8		ug/L		104	70 - 130	7	12
2,2-Dichloropropane	20.0	19.7		ug/L		98	60 - 143	5	20
2-Chlorotoluene	20.0	20.0		ug/L		100	70 - 130	8	15
4-Chlorotoluene	20.0	20.1		ug/L		100	70 - 130	4	15
Benzene	20.0	18.8		ug/L		94	70 - 130	3	12
Bromobenzene	20.0	18.5		ug/L		92	70 - 130	3	16
Bromochloromethane	20.0	21.1		ug/L		106	70 - 130	0	16
Bromodichloromethane	20.0	20.1		ug/L		100	70 - 130	5	14
Bromoform	20.0	17.7		ug/L		89	70 - 137	5	14
Bromomethane	20.0	38.9 *		ug/L		194	53 - 150	11	19
Carbon tetrachloride	20.0	22.1		ug/L		111	70 - 147	12	16
Chlorobenzene	20.0	20.8		ug/L		104	70 - 130	5	12
Chloroethane	20.0	24.0		ug/L		120	60 - 138	4	15
Chloroform	20.0	21.4		ug/L		107	70 - 130	3	14
Chloromethane	20.0	24.3		ug/L		122	33 - 150	7	20
cis-1,2-Dichloroethene	20.0	21.4		ug/L		107	70 - 130	4	15
cis-1,3-Dichloropropene	20.0	20.4		ug/L		102	70 - 133	5	15
Dibromochloromethane	20.0	19.9		ug/L		100	70 - 133	2	13
Dibromomethane	20.0	18.3		ug/L		92	70 - 130	5	14
Dichlorodifluoromethane	20.0	25.4		ug/L		127	48 - 150	8	16

TestAmerica Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 490-556217/4**  
**Matrix: Water**  
**Analysis Batch: 556217**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	20.0	20.0		ug/L		100	70 - 130	5	12
Hexachlorobutadiene	20.0	21.5		ug/L		108	70 - 138	1	16
Isopropylbenzene	20.0	20.2		ug/L		101	70 - 131	7	13
Methyl tert-butyl ether	20.0	20.7		ug/L		104	70 - 130	2	16
Methylene Chloride	20.0	21.6		ug/L		108	70 - 130	7	15
Naphthalene	20.0	17.0		ug/L		85	54 - 150	6	15
n-Butylbenzene	20.0	19.7		ug/L		98	68 - 137	5	14
N-Propylbenzene	20.0	19.5		ug/L		97	70 - 134	6	14
p-Isopropyltoluene	20.0	20.0		ug/L		100	66 - 130	4	13
sec-Butylbenzene	20.0	19.3		ug/L		97	70 - 135	3	14
Styrene	20.0	19.6		ug/L		98	70 - 130	2	12
tert-Butylbenzene	20.0	20.0		ug/L		100	70 - 130	6	14
Tetrachloroethene	20.0	22.1		ug/L		110	70 - 130	3	17
Toluene	20.0	21.0		ug/L		105	70 - 130	4	13
trans-1,2-Dichloroethene	20.0	22.2		ug/L		111	70 - 130	6	15
trans-1,3-Dichloropropene	20.0	19.0		ug/L		95	63 - 142	2	13
Trichloroethene	20.0	20.7		ug/L		104	70 - 130	10	14
Trichlorofluoromethane	20.0	27.8		ug/L		139	59 - 150	5	22
Vinyl chloride	20.0	23.4		ug/L		117	57 - 137	5	15
Xylenes, Total	40.0	40.1		ug/L		100	70 - 132	2	11

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	110		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130
Toluene-d8 (Surr)	107		70 - 130

# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: EXW-4**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-1**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 15:23	SW1	TAL NSH

**Client Sample ID: EXW-6**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-2**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 15:50	SW1	TAL NSH

**Client Sample ID: Muni #3**

**Date Collected: 10/30/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-3**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 16:17	SW1	TAL NSH

**Client Sample ID: MW-17**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-4**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 16:43	SW1	TAL NSH

**Client Sample ID: MW-18**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-5**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 17:10	SW1	TAL NSH

**Client Sample ID: MW-19**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-6**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 17:36	SW1	TAL NSH
Total/NA	Analysis	8260B		5	556217	11/09/18 14:45	AK1	TAL NSH

TestAmerica Chicago

# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: MW-21**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-7**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 18:03	SW1	TAL NSH

**Client Sample ID: MW-21A**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-8**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 18:29	SW1	TAL NSH

**Client Sample ID: B-1**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-9**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 18:56	SW1	TAL NSH

**Client Sample ID: B-1A**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-10**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 19:22	SW1	TAL NSH

**Client Sample ID: B-1B**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-11**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 19:49	SW1	TAL NSH

**Client Sample ID: B-3**

**Date Collected: 10/30/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-12**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 20:16	SW1	TAL NSH

TestAmerica Chicago

# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-3A**  
**Date Collected: 10/30/18 00:00**  
**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-13**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 20:42	SW1	TAL NSH

**Client Sample ID: B-10**  
**Date Collected: 10/29/18 00:00**  
**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-14**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 21:09	SW1	TAL NSH

**Client Sample ID: B-11**  
**Date Collected: 10/29/18 00:00**  
**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-15**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 21:35	SW1	TAL NSH

**Client Sample ID: B-12**  
**Date Collected: 10/29/18 00:00**  
**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-16**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 22:02	SW1	TAL NSH

**Client Sample ID: B-13**  
**Date Collected: 10/30/18 00:00**  
**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-17**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 22:29	SW1	TAL NSH

**Client Sample ID: B-13A**  
**Date Collected: 10/30/18 00:00**  
**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-18**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 22:55	SW1	TAL NSH

TestAmerica Chicago



# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

**Client Sample ID: B-13B**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-19**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555876	11/08/18 23:22	SW1	TAL NSH

**Client Sample ID: MW-18A**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-20**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555864	11/08/18 17:17	AK1	TAL NSH

**Client Sample ID: MW-19A**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-21**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555864	11/08/18 17:44	AK1	TAL NSH

**Client Sample ID: Discharge**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-22**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555864	11/08/18 18:12	AK1	TAL NSH

**Client Sample ID: B-1A Dup**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-23**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555864	11/08/18 18:39	AK1	TAL NSH

**Client Sample ID: Trip Blank**

**Date Collected: 10/29/18 00:00**

**Date Received: 11/01/18 09:50**

**Lab Sample ID: 500-154152-24**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	555864	11/08/18 16:49	AK1	TAL NSH

## Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TestAmerica Chicago

# Accreditation/Certification Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

TestAmerica Job ID: 500-154152-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19

## Laboratory: TestAmerica Nashville

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998020430	08-31-19

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Regulatory Program:  DW  NPDES  RCRA  Other:

Client Contact: **MMA Professional** Project Manager: **Dick Luster** Site Contact: **10/29-30/18** COC No: **1** of **2** COCs

Company Name: **MMA Professional** Tel/Fax: **1232 South Blvd.** Lab Contact: **1232 South Blvd.** Carrier: **1232 South Blvd.**

Address: **1232 South Blvd.** Analysis Turnaround Time:  CALENDAR DAYS  WORKING DAYS

City/State/Zip: **Baltimore, MD 21201** TAT if different from Below:  2 weeks  1 week  2 days  1 day

Phone: **410-336-2771** Project Name: **Minsigna Cleaners**

Fax: **410-336-2771** Site: **Minsigna Cleaners**

Job / SDG No.: **500-154152**

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Sample Specific Notes
1 Exw-4	10/29/18	3:18	G	GW	3	N	X	
2 Exw-4	[Vertical Line]	[Vertical Line]	[Vertical Line]	[Vertical Line]	[Vertical Line]	[Vertical Line]	[Vertical Line]	
3 Muni #3								X
4 mw-17								X
5 mw-18								X
6 mw-19								X
7 mw-21								X
8 mw-21A								X
9 B-1								X
10 B-1A								X
11 B-1B								X
12 B-3								X

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Special Instructions/QC Requirements & Comments:

Custody Seals Intact:  Yes  No Cooler Temp. (°C): Obs'd: **28.32** Cor'd: \_\_\_\_\_ Therm ID No.: \_\_\_\_\_

Relinquished by: **[Signature]** Company: **MMA** Date/Time: **10/30/18** Received by: \_\_\_\_\_ Company: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Company: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Received in Laboratory by: **[Signature]** Company: **TALME** Date/Time: **11/16/18 0950**



Chain of Custody Record

274784

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING  
TestAmerica Laboratories, Inc.  
TAL-8210 (0713)

Regulatory Program:  DW  NPDES  RCRA  Other:

Client Contact		Project Manager: <u>Dick Luster</u>		Site Contact:		Date: <u>12/29-30/18</u>		COG No: <u>2</u>	
Company Name: <u>MBA Professional</u>		Tel/Fax:		Lab Contact:		Carrier:		2 of 2 COCs	
Address: <u>1232 Sandy Blvd</u>		Analysis Turnaround Time		Filtered Sample (Y/N) Perform MS / MSD (Y/N) <u>VDC 9/18/18</u>				Sampler:	
City/State/Zip: <u>Baltimore MD 21213</u>		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS						For Lab Use Only:	
Phone: <u>410-356-2571</u>		TAT if different from Below _____						Walk-in Client:	
Fax:		<input type="checkbox"/> 2 weeks						Lab Sampling:	
Project Name: <u>Mundana Cleaners</u>		<input type="checkbox"/> 1 week				Job / SDG No.:			
Site: <u>WI</u>		<input type="checkbox"/> 2 days						<u>505-154152</u>	
PO#		<input type="checkbox"/> 1 day						Sample Specific Notes:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)		
13 B-3A	12/29	3:10	G	6W	3	N	X		
14 B-10	}	}	}	}	}	}	X		
15 B-11									
16 B-12									
17 B-13									
18 B-13A									
19 B-13B									
20 MW-18A									
21 MW-19A									
22 Discharge									
23 B-1A Dup									
24 Trip Blank									
Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.						<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown									
Special Instructions/QC Requirements & Comments:									
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temp. (°C): Obs'd: <u>28.3.2</u>		Therm ID No.:			
Relinquished by: <u>[Signature]</u>		Company: <u>MBA</u>		Date/Time: <u>12/30/18</u>		Received by:		Date/Time:	
Relinquished by:		Company:		Date/Time:		Received by:		Date/Time:	
Relinquished by:		Company:		Date/Time:		Received in Laboratory by: <u>[Signature]</u>		Company: <u>TAL-11</u> Date/Time: <u>11/01/18 0950</u>	

ORIGIN ID:PHDA (330) 966-9677  
DAVE FITZSIMMONS  
MSA PROFESSIONAL SERVICES, INC  
1230 SOUTH BLVD

SHIP DATE: 15OCT18  
ACTWGT: 10.00 LB MAN  
CAD: 0562065/CAFE3211

BARABOO, WI 53913  
UNITED STATES US

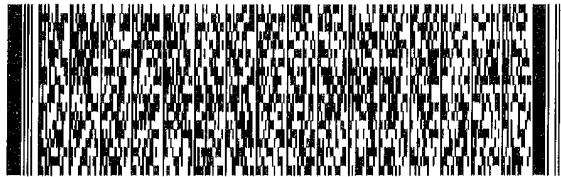
TO **SAMPLE RECEIVING**  
**TESTAMERICA CHICAGO**  
**2417 BOND STREET**

**UNIVERSITY PARK IL 604843101**

(708) 534-5200

REF: S600-66433

RMA: III IIII III



**FedEx**  
Express



**RETURNS MON-SAT**  
**PRIORITY OVERNIGHT**

TRK# 4433 3394 2987  
0221

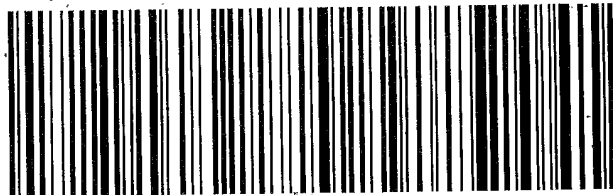
**THU - 01 NOV 10:30A**  
**PRIORITY OVERNIGHT**



**FedEx**  
TRK# 4433 3394 2987  
0221

**79 JOTA**

**60484**  
IL-US  
ORD  
500-154152 Waybill



FTD 5280661 31OCT18 RHIA 553C1/38E7/0C8A

48 qt.

ORIGIN ID:PHDA (330) 966-9677  
DAVE FITZSIMMONS  
MSA PROFESSIONAL SERVICES, INC  
1230 SOUTH BLVD

SHIP DATE: 15OCT18  
ACTWGT: 10.00 LB MAN  
CAD: 0562065/CAFE3211

BARABOO, WI 53913  
UNITED STATES US

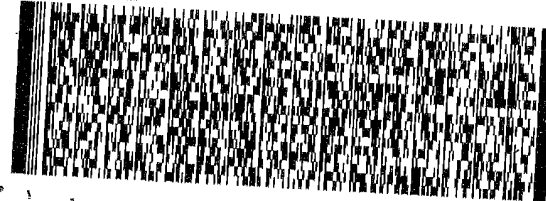
TO **SAMPLE RECEIVING**  
**TESTAMERICA CHICAGO**  
**2417 BOND STREET**

**UNIVERSITY PARK IL 604843101**

(708) 534-5200

REF: S600-66433

RMA: III IIII III



**FedEx**  
Express



**RETURNS MON-SAT**  
**PRIORITY OVERNIGHT**

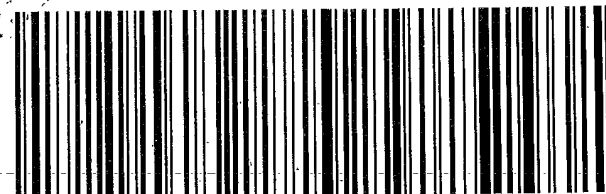
TRK# 4433 3394 2998  
0221

**THU - 01 NOV 10:30A**  
**PRIORITY OVERNIGHT**

**FedEx**  
TRK# 4433 3394 2998  
0221

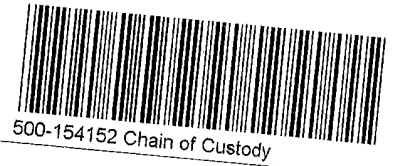
**79 JOTA**

**60484**  
IL-US  
ORD



FTD 5280661 31OCT18 RHIA 553C1/38E7/0C8A

48 qt.



## COOLER RECEIPT FORM

Cooler Received/Opened On 11/8/2018 @ 1000

Time Samples Removed From Cooler 14:06 Time Samples Placed In Storage 14:15 (2 Hour Window)

1. Tracking # 4992 (last 4 digits, FedEx) Courier: FedEx  
IR Gun ID 17610176 pH Strip Lot \_\_\_\_\_ Chlorine Strip Lot 1

2. Temperature of rep. sample or temp blank when opened: 0.8 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA  YES  NO  NA

4. Were custody seals on outside of cooler? YES...NO...NA  YES  NO  NA  
If yes, how many and where: (1 Front)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA  YES  NO  NA

6. Were custody papers inside cooler? YES...NO...NA  YES  NO  NA

I certify that I opened the cooler and answered questions 1-6 (initial) 2.2

7. Were custody seals on containers: YES  NO  and Intact YES...NO...NA  YES  NO  NA

Were these signed and dated correctly? YES...NO...NA  YES  NO  NA

8. Packing mat'l used?  Bubblewrap  Plastic bag  Peanuts  Vermiculite  Foam Insert  Paper  Other  None

9. Cooling process:  Ice  Ice-pack  Ice (direct contact)  Dry ice  Other  None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA  YES  NO  NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA  YES  NO  NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA  YES  NO  NA

13a. Were VOA vials received? YES...NO...NA  YES  NO  NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA  YES  NO  NA



14. Was there a Trip Blank in this cooler? YES...NO...NA  YES  NO  NA If multiple coolers, sequence # \_\_\_\_\_

I certify that I unloaded the cooler and answered questions 7-14 (initial) 2.2

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA  YES  NO  NA

b. Did the bottle labels indicate that the correct preservatives were used? YES...NO...NA  YES  NO  NA

16. Was residual chlorine present? YES...NO...NA  YES  NO  NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) 2.2

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA  YES  NO  NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA  YES  NO  NA

19. Were correct containers used for the analysis requested? YES...NO...NA  YES  NO  NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA  YES  NO  NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) 2.2

I certify that I attached a label with the unique LIMS number to each container (initial) 2.2

21. Were there Non-Conformance issues at login? YES...NO  YES  NO Was a NCM generated? YES...NO...# \_\_\_\_\_

**COOLER RECEIPT FORM**

Cooler Received/Opened On 11/8/2018 @ 1000  
 Time Samples Removed From Cooler 14:06 Time Samples Placed In Storage 14:15 (2 Hour Window)

1. Tracking # 4994 (last 4 digits, FedEx) Courier: FedEx  
 IR Gun ID 17610176 pH Strip Lot \_\_\_\_\_ Chlorine Strip Lot \_\_\_\_\_
2. Temperature of rep. sample or temp blank when opened: 3.6 Degrees Celsius
3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA
4. Were custody seals on outside of cooler? YES...NO...NA  
 If yes, how many and where: ((Front))

5. Were the seals intact, signed, and dated correctly? YES...NO...NA *not signed*
6. Were custody papers inside cooler? YES...NO...NA
- I certify that I opened the cooler and answered questions 1-6 (initial) 2.2

7. Were custody seals on containers: YES NO and Intact YES...NO...NA  
 Were these signed and dated correctly? YES...NO...NA
8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None
9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None
10. Did all containers arrive in good condition (unbroken)? YES...NO...NA
11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA
12. Did all container labels and tags agree with custody papers? YES...NO...NA
- 13a. Were VOA vials received? YES...NO...NA
- b. Was there any observable headspace present in any VOA vial? YES...NO...NA



14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # \_\_\_\_\_
- I certify that I unloaded the cooler and answered questions 7-14 (initial) 2.2

- 15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA  
 b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA
16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) 2.2

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA
18. Did you sign the custody papers in the appropriate place? YES...NO...NA
19. Were correct containers used for the analysis requested? YES...NO...NA
20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) 2.2

I certify that I attached a label with the unique LIMS number to each container (initial) 2.2

21. Were there Non-Conformance issues at login? YES...NO... Was a NCM generated? YES...NO...# \_\_\_\_\_

**TestAmerica Chicago**  
 2417 Bond Street  
 University Park, IL 60484  
 Phone (708) 534-5200 Fax (708) 534-5211

**Chain of Custody Record**

**500-154152**

**estAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

<b>Client Information (Sub Contract Lab)</b>		Lab P/N: <b>Frederick, Sandie J</b>	Wisconsin	
Shipping/Receiving		E-Mail: <b>sandie.frederick@testamericac.com</b>	Page 1 of 3	
Company: <b>TestAmerica Laboratories, Inc</b>		Accreditations Required (See note): State Program - Wisconsin		Job #: <b>500-154152-1</b>
Address: <b>2960 Foster Creighton Drive,</b>		Due Date Requested: <b>11/13/2018</b>		<b>Analysis Requested</b>  Total Number of Containers:
City: <b>Nashville</b>		TAT Requested (days):		
State/Zip: <b>TN, 37204</b>		PO #:		
Phone: <b>615-726-0177(Tel) 615-726-3404(Fax)</b>		WO #:		
Email:		Project #:		
Project Name: <b>Minoqua Cleaners</b>		SSOW#: <b>50006625</b>		
Site:		Field Filtered Sample (Yes or No)		
Sample Identification - Client ID (Lab ID)		8260B/5030B VOCs - Wisconsin		
Form MS/MSD (Yes or No)		Performance (Yes or No)		
Special Instructions/Note:				

Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Soil, Sludge, Sewage, etc.)	Preservation Code	Field Filtered Sample (Yes or No)	8260B/5030B VOCs - Wisconsin	Total Number of Containers	Special Instructions/Note
EXW-4 (500-154152-1)	10/29/18	Central		Water		X	X	3	
EXW-6 (500-154152-2)	10/29/18	Central		Water		X	X	3	
Muni #3 (500-154152-3)	10/30/18	Central		Water		X	X	3	
MW-17 (500-154152-4)	10/29/18	Central		Water		X	X	3	
MW-18 (500-154152-5)	10/29/18	Central		Water		X	X	3	
MW-19 (500-154152-6)	10/29/18	Central		Water		X	X	3	
MW-21 (500-154152-7)	10/29/18	Central		Water		X	X	3	
MW-21A (500-154152-8)	10/29/18	Central		Water		X	X	3	
B-1 (500-154152-9)	10/29/18	Central		Water		X	X	3	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: *[Signature]* Date: **11/7/18**  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Company: **TA** Company  
 Company: **TA** Company  
 Company: \_\_\_\_\_ Company

Received by: **Annunzio Peto** Date/Time: **11/28/18 10:00**  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks: **3.6, 0.3**

Custody Seal No.: \_\_\_\_\_  
 Custody Seals Intact:  Yes  No





**TestAmerica Chicago**

2417 Bond Street  
University Park, IL 60484  
Phone (708) 534-5200 Fax (708) 534-5211

**Chain of Custody Record**

Loc: 500  
**154152**



**Client Information (Sub Contract Lab)**  
 Shipping/Receiving  
 Company: TestAmerica Laboratories, Inc  
 Address: 2960 Foster Creighton Drive, Nashville, TN, 37204  
 Phone: 615-726-0177 (Tel) 615-726-3404 (Fax)  
 Email: [Blank]  
 Project Name: Minocqua Cleaners  
 Site: [Blank]

**Sample Information**  
 Sample: [Blank]  
 Lab PM: Fredrick, Sandie J  
 Phone: [Blank]  
 E-Mail: sandie.fredrick@testamericainc.com

**Due Date Requested:** 11/13/2018  
**TAT Requested (days):** [Blank]  
**PO #:** [Blank]  
**WO #:** [Blank]  
**Project #:** 50006625  
**SSOW #:** [Blank]

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=Solid, O=Other)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	826B/503B VOCs - Wisconsin
B-1A (500-154152-10)	10/29/18	Central		Water		X	X	X
B-1B (500-154152-11)	10/29/18	Central		Water		X	X	X
B-3 (500-154152-12)	10/30/18	Central		Water		X	X	X
B-3A (500-154152-13)	10/30/18	Central		Water		X	X	X
B-10 (500-154152-14)	10/29/18	Central		Water		X	X	X
B-11 (500-154152-15)	10/29/18	Central		Water		X	X	X
B-12 (500-154152-16)	10/29/18	Central		Water		X	X	X
B-13 (500-154152-17)	10/30/18	Central		Water		X	X	X
B-13A (500-154152-18)	10/30/18	Central		Water		X	X	X

**Analysis Requested:** [Blank]

**Preservation Codes:**  
 M - Hexane  
 N - None  
 O - AsNaO2  
 P - Na2O4S  
 Q - Na2SO3  
 R - Na2SO3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4-5  
 L - EDTA  
 Other: [Blank]

**Special Instructions/Note:** [Blank]

**Special Instructions/QC Requirements:**  
 Return To Client  
 Disposal By Lab  
 Archive For [Blank] Months

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) [Blank]  
 Primary Deliverable Rank: 2

**Relinquished by:** [Signature]  
 Date: 11/13/18  
 Date/Time: 1600  
 Company: [Blank]

**Received by:** [Signature]  
 Date/Time: 10/29/18 15:50  
 Company: [Blank]

**Relinquished by:** [Blank]  
 Date/Time: [Blank]  
 Company: [Blank]

**Relinquished by:** [Blank]  
 Date/Time: [Blank]  
 Company: [Blank]

**Custody Seal No.:**  $\Delta$  Yes  $\Delta$  No  
 Cooler Temperature(s) °C and Other Remarks: 3-6, 0.8

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. 1

**TestAmerica Chicago**  
 2417 Bond Street  
 University Park, IL 60484  
 Phone (708) 534-5200 Fax (708) 534-5211

**Chain of Custody Record**

Loc: 500  
**154152**

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

<b>Client Information (Sub Contract Lab)</b>		Lab PM: Fredrick, Sandie J	ig No(s):						
Client Contact: TestAmerica Laboratories, Inc		E-Mail: sandie.fredrick@testamerica.com	500-112974.3						
Shipping/Receiving: 2960 Foster Creighton Drive, Nashville, TN, 37204		State of Origin: Wisconsin	Page: Page 3 of 3						
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Wisconsin	Job #: 500-154152-1						
Address: 2960 Foster Creighton Drive, Nashville, TN, 37204		Preservation Codes:							
Phone: 615-726-0177(Tel) 615-726-3404(Fax)		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:							
Project Name: Minoqua Cleaners		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)							
Site:		Total Number of Containers							
Due Date Requested: 11/13/2018		Analysis Requested							
TAT Requested (days):		Perform MS/MSD (Yes or No)							
PO #:		Field Filtered Sample (Yes or No)							
WO #:		826B/5030B VOCs - Wisconsin							
Project #: 50006625		Special Instructions/Note:							
SSOW#:									
<b>Sample Identification - Client ID (Lab ID)</b>									
Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of Containers	Special Instructions/Note
B-13B (500-154152-19)	10/29/18	Central	Water	Water		X	X	3	
MW-18A (500-154152-20)	10/29/18	Central	Water	Water		X	X	3	
MW-19A (500-154152-21)	10/29/18	Central	Water	Water		X	X	3	
Discharge (500-154152-22)	10/29/18	Central	Water	Water		X	X	3	
B-1A Dup (500-154152-23)	10/29/18	Central	Water	Water		X	X	3	
Trip Blank (500-154152-24)	10/29/18	Central	Water	Water		X	X	2	
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I									
<b>Possible Hazard Identification</b>									
Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months									
Special Instructions/QC Requirements:									
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____									
Relinquished by: <i>[Signature]</i> Date/Time: 11/13/18 1600 Company: TA Company									
Relinquished by: <i>[Signature]</i> Date/Time: 11/13/18 10:00 Company: TA Company									
Relinquished by: _____ Date/Time: _____ Company: _____									
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Δ <input type="checkbox"/> No <input type="checkbox"/> Δ No <input type="checkbox"/> Δ No									
Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: 0.3, 3.6									



# Login Sample Receipt Checklist

Client: MSA Professional Services, Inc

Job Number: 500-154152-1

**Login Number: 154152**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8, 3.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## ANALYTICAL REPORT

Eurofins TestAmerica, Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

Laboratory Job ID: 500-161349-1

Client Project/Site: Minocqua Cleaners - 8267019

**For:**

MSA Professional Services, Inc  
1230 South Blvd  
Baraboo, Wisconsin 53913

Attn: Mr. Richard Lyster



Authorized for release by:  
4/22/2019 5:52:02 PM

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



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# Case Narrative

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

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## Job ID: 500-161349-1

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Laboratory: Eurofins TestAmerica, Chicago

### Narrative

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#### Job Narrative 500-161349-1

### Comments

No additional comments.

### Receipt

The samples were received on 4/10/2019 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was -1.5° C.

### GC/MS VOA

Method(s) 8260B: Methylene Chloride was detected in the following samples: EXW-4 (500-161349-1), EXW-6 (500-161349-2), Muni #3 (500-161349-3), MW-17 (500-161349-4), MW-18 (500-161349-5), MW-20 (500-161349-7) and MW-21 (500-161349-8). The method blank associated with the samples was non-detect for all compounds. Methylene Chloride is a known lab contaminant; therefore all low level detects for this compound should be suspected as lab contamination.

Method(s) 8260B: The following analyte recovered outside control limits for the laboratory control sample (LCS) associated with analytical batch 481426: Bromomethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.



# Detection Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Client Sample ID: EXW-4

## Lab Sample ID: 500-161349-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.3		1.0	0.41	ug/L	1		8260B	Total/NA
Methylene Chloride	3.0	J	5.0	1.6	ug/L	1		8260B	Total/NA
Trichloroethene	1.0		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: EXW-6

## Lab Sample ID: 500-161349-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	2.8	J	5.0	1.6	ug/L	1		8260B	Total/NA
Trichloroethene	1.0		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: Muni #3

## Lab Sample ID: 500-161349-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	3.2	J	5.0	1.6	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-17

## Lab Sample ID: 500-161349-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	19		1.0	0.41	ug/L	1		8260B	Total/NA
Methylene Chloride	3.0	J	5.0	1.6	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.65	J	1.0	0.35	ug/L	1		8260B	Total/NA
Trichloroethene	0.70		0.50	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	7.9		1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-18

## Lab Sample ID: 500-161349-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.2		1.0	0.41	ug/L	1		8260B	Total/NA
Methylene Chloride	2.8	J	5.0	1.6	ug/L	1		8260B	Total/NA
Tetrachloroethene	0.50	J	1.0	0.37	ug/L	1		8260B	Total/NA
Trichloroethene	0.17	J	0.50	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	0.51	J	1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-19

## Lab Sample ID: 500-161349-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	5.1		1.0	0.41	ug/L	1		8260B	Total/NA
Methylene Chloride	3.0	J	5.0	1.6	ug/L	1		8260B	Total/NA
Tetrachloroethene	2.4		1.0	0.37	ug/L	1		8260B	Total/NA
Vinyl chloride	3.5		1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-20

## Lab Sample ID: 500-161349-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	3.1	J	5.0	1.6	ug/L	1		8260B	Total/NA
Tetrachloroethene	3.6		1.0	0.37	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-21

## Lab Sample ID: 500-161349-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	2.9	J	5.0	1.6	ug/L	1		8260B	Total/NA
Tetrachloroethene	7.5		1.0	0.37	ug/L	1		8260B	Total/NA
Trichloroethene	0.19	J	0.50	0.16	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

# Detection Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Client Sample ID: MW-21A

Lab Sample ID: 500-161349-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	32		1.0	0.41	ug/L	1		8260B	Total/NA
Tetrachloroethene	0.82	J	1.0	0.37	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.54	J	1.0	0.35	ug/L	1		8260B	Total/NA
Trichloroethene	2.3		0.50	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	3.0		1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: B-1

Lab Sample ID: 500-161349-10

No Detections.

## Client Sample ID: B-1A

Lab Sample ID: 500-161349-11

No Detections.

## Client Sample ID: B-1B

Lab Sample ID: 500-161349-12

No Detections.

## Client Sample ID: B-3

Lab Sample ID: 500-161349-13

No Detections.

## Client Sample ID: B-3A

Lab Sample ID: 500-161349-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.71	J	1.0	0.37	ug/L	1		8260B	Total/NA

## Client Sample ID: B-10

Lab Sample ID: 500-161349-15

No Detections.

## Client Sample ID: B-11

Lab Sample ID: 500-161349-16

No Detections.

## Client Sample ID: B-12

Lab Sample ID: 500-161349-17

No Detections.

## Client Sample ID: B-13

Lab Sample ID: 500-161349-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromodichloromethane	0.73	J	1.0	0.37	ug/L	1		8260B	Total/NA
Chloroform	6.5		2.0	0.37	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	44		1.0	0.41	ug/L	1		8260B	Total/NA
Tetrachloroethene	44		1.0	0.37	ug/L	1		8260B	Total/NA
Trichloroethene	28		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: B-13A

Lab Sample ID: 500-161349-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.50	J	1.0	0.37	ug/L	1		8260B	Total/NA
Trichloroethene	0.19	J	0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: B-13B

Lab Sample ID: 500-161349-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.7		1.0	0.37	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago



# Detection Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Client Sample ID: B-13B (Continued)

Lab Sample ID: 500-161349-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.57		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-18A

Lab Sample ID: 500-161349-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.75	J	1.0	0.37	ug/L	1		8260B	Total/NA
Trichloroethene	0.85		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-19A

Lab Sample ID: 500-161349-22

No Detections.

## Client Sample ID: Discharge Pipe

Lab Sample ID: 500-161349-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.6		1.0	0.41	ug/L	1		8260B	Total/NA
Trichloroethene	0.77		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: B-1B Dup

Lab Sample ID: 500-161349-24

No Detections.

## Client Sample ID: Trip Blank

Lab Sample ID: 500-161349-25

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

# Method Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
5030B	Purge and Trap	SW846	TAL CHI

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



# Sample Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-161349-1	EXW-4	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-2	EXW-6	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-3	Muni #3	Ground Water	04/09/19 00:00	04/10/19 09:20
500-161349-4	MW-17	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-5	MW-18	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-6	MW-19	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-7	MW-20	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-8	MW-21	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-9	MW-21A	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-10	B-1	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-11	B-1A	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-12	B-1B	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-13	B-3	Ground Water	04/09/19 00:00	04/10/19 09:20
500-161349-14	B-3A	Ground Water	04/09/19 00:00	04/10/19 09:20
500-161349-15	B-10	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-16	B-11	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-17	B-12	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-18	B-13	Ground Water	04/09/19 00:00	04/10/19 09:20
500-161349-19	B-13A	Ground Water	04/09/19 00:00	04/10/19 09:20
500-161349-20	B-13B	Ground Water	04/09/19 00:00	04/10/19 09:20
500-161349-21	MW-18A	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-22	MW-19A	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-23	Discharge Pipe	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-24	B-1B Dup	Ground Water	04/08/19 00:00	04/10/19 09:20
500-161349-25	Trip Blank	Ground Water	04/09/19 00:00	04/10/19 09:20

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: EXW-4**

**Lab Sample ID: 500-161349-1**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/18/19 15:24	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/18/19 15:24	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/18/19 15:24	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/18/19 15:24	1
Bromoform	<0.48		1.0	0.48	ug/L			04/18/19 15:24	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/18/19 15:24	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/18/19 15:24	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/18/19 15:24	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/18/19 15:24	1
Chloroform	<0.37		2.0	0.37	ug/L			04/18/19 15:24	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/18/19 15:24	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/18/19 15:24	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/18/19 15:24	1
<b>cis-1,2-Dichloroethene</b>	<b>1.3</b>		1.0	0.41	ug/L			04/18/19 15:24	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/18/19 15:24	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/18/19 15:24	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/18/19 15:24	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/18/19 15:24	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/18/19 15:24	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/18/19 15:24	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/18/19 15:24	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/18/19 15:24	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/18/19 15:24	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/18/19 15:24	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/18/19 15:24	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/18/19 15:24	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/18/19 15:24	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/18/19 15:24	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/18/19 15:24	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/18/19 15:24	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/18/19 15:24	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/18/19 15:24	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 15:24	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/18/19 15:24	1
<b>Methylene Chloride</b>	<b>3.0 J</b>		5.0	1.6	ug/L			04/18/19 15:24	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/18/19 15:24	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/18/19 15:24	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 15:24	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/18/19 15:24	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/18/19 15:24	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 15:24	1
Styrene	<0.39		1.0	0.39	ug/L			04/18/19 15:24	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 15:24	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/18/19 15:24	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/18/19 15:24	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/18/19 15:24	1
Toluene	<0.15		0.50	0.15	ug/L			04/18/19 15:24	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/18/19 15:24	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/18/19 15:24	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: EXW-4**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-1**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/18/19 15:24	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/18/19 15:24	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/18/19 15:24	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/18/19 15:24	1
<b>Trichloroethene</b>	<b>1.0</b>		0.50	0.16	ug/L			04/18/19 15:24	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/18/19 15:24	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/18/19 15:24	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/18/19 15:24	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/18/19 15:24	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/18/19 15:24	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/18/19 15:24	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	109		72 - 124					04/18/19 15:24	1
Dibromofluoromethane	98		75 - 120					04/18/19 15:24	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126					04/18/19 15:24	1
Toluene-d8 (Surr)	101		75 - 120					04/18/19 15:24	1

**Client Sample ID: EXW-6**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-2**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/18/19 15:52	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/18/19 15:52	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/18/19 15:52	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/18/19 15:52	1
Bromoform	<0.48		1.0	0.48	ug/L			04/18/19 15:52	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/18/19 15:52	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/18/19 15:52	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/18/19 15:52	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/18/19 15:52	1
Chloroform	<0.37		2.0	0.37	ug/L			04/18/19 15:52	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/18/19 15:52	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/18/19 15:52	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/18/19 15:52	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/18/19 15:52	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/18/19 15:52	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/18/19 15:52	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/18/19 15:52	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/18/19 15:52	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/18/19 15:52	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/18/19 15:52	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/18/19 15:52	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/18/19 15:52	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/18/19 15:52	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/18/19 15:52	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/18/19 15:52	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/18/19 15:52	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: EXW-6**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-2**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/18/19 15:52	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/18/19 15:52	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/18/19 15:52	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/18/19 15:52	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/18/19 15:52	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/18/19 15:52	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 15:52	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/18/19 15:52	1
<b>Methylene Chloride</b>	<b>2.8</b>	<b>J</b>	5.0	1.6	ug/L			04/18/19 15:52	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/18/19 15:52	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/18/19 15:52	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 15:52	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/18/19 15:52	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/18/19 15:52	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 15:52	1
Styrene	<0.39		1.0	0.39	ug/L			04/18/19 15:52	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 15:52	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/18/19 15:52	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/18/19 15:52	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/18/19 15:52	1
Toluene	<0.15		0.50	0.15	ug/L			04/18/19 15:52	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/18/19 15:52	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/18/19 15:52	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/18/19 15:52	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/18/19 15:52	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/18/19 15:52	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/18/19 15:52	1
<b>Trichloroethene</b>	<b>1.0</b>		0.50	0.16	ug/L			04/18/19 15:52	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/18/19 15:52	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/18/19 15:52	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/18/19 15:52	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/18/19 15:52	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/18/19 15:52	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/18/19 15:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		72 - 124		04/18/19 15:52	1
Dibromofluoromethane	97		75 - 120		04/18/19 15:52	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		04/18/19 15:52	1
Toluene-d8 (Surr)	102		75 - 120		04/18/19 15:52	1

**Client Sample ID: Muni #3**

**Date Collected: 04/09/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-3**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/18/19 16:18	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/18/19 16:18	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/18/19 16:18	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: Muni #3**

**Lab Sample ID: 500-161349-3**

**Date Collected: 04/09/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/18/19 16:18	1
Bromoform	<0.48		1.0	0.48	ug/L			04/18/19 16:18	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/18/19 16:18	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/18/19 16:18	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/18/19 16:18	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/18/19 16:18	1
Chloroform	<0.37		2.0	0.37	ug/L			04/18/19 16:18	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/18/19 16:18	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/18/19 16:18	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/18/19 16:18	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/18/19 16:18	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/18/19 16:18	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/18/19 16:18	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/18/19 16:18	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/18/19 16:18	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/18/19 16:18	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/18/19 16:18	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/18/19 16:18	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/18/19 16:18	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/18/19 16:18	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/18/19 16:18	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/18/19 16:18	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/18/19 16:18	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/18/19 16:18	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/18/19 16:18	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/18/19 16:18	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/18/19 16:18	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/18/19 16:18	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/18/19 16:18	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 16:18	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/18/19 16:18	1
<b>Methylene Chloride</b>	<b>3.2 J</b>		5.0	1.6	ug/L			04/18/19 16:18	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/18/19 16:18	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/18/19 16:18	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 16:18	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/18/19 16:18	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/18/19 16:18	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 16:18	1
Styrene	<0.39		1.0	0.39	ug/L			04/18/19 16:18	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 16:18	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/18/19 16:18	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/18/19 16:18	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/18/19 16:18	1
Toluene	<0.15		0.50	0.15	ug/L			04/18/19 16:18	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/18/19 16:18	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/18/19 16:18	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/18/19 16:18	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/18/19 16:18	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/18/19 16:18	1

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: Muni #3**

**Date Collected: 04/09/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-3**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/18/19 16:18	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/18/19 16:18	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/18/19 16:18	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/18/19 16:18	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/18/19 16:18	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/18/19 16:18	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/18/19 16:18	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/18/19 16:18	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	113		72 - 124					04/18/19 16:18	1
Dibromofluoromethane	99		75 - 120					04/18/19 16:18	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 126					04/18/19 16:18	1
Toluene-d8 (Surr)	101		75 - 120					04/18/19 16:18	1

**Client Sample ID: MW-17**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-4**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/18/19 16:45	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/18/19 16:45	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/18/19 16:45	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/18/19 16:45	1
Bromoform	<0.48		1.0	0.48	ug/L			04/18/19 16:45	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/18/19 16:45	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/18/19 16:45	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/18/19 16:45	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/18/19 16:45	1
Chloroform	<0.37		2.0	0.37	ug/L			04/18/19 16:45	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/18/19 16:45	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/18/19 16:45	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/18/19 16:45	1
<b>cis-1,2-Dichloroethene</b>	<b>19</b>		1.0	0.41	ug/L			04/18/19 16:45	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/18/19 16:45	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/18/19 16:45	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/18/19 16:45	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/18/19 16:45	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/18/19 16:45	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/18/19 16:45	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/18/19 16:45	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/18/19 16:45	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/18/19 16:45	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/18/19 16:45	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/18/19 16:45	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/18/19 16:45	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/18/19 16:45	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/18/19 16:45	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/18/19 16:45	1

Eurofins TestAmerica, Chicago



# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-17**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-4**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/18/19 16:45	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/18/19 16:45	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/18/19 16:45	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 16:45	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/18/19 16:45	1
<b>Methylene Chloride</b>	<b>3.0</b>	<b>J</b>	5.0	1.6	ug/L			04/18/19 16:45	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/18/19 16:45	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/18/19 16:45	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 16:45	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/18/19 16:45	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/18/19 16:45	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 16:45	1
Styrene	<0.39		1.0	0.39	ug/L			04/18/19 16:45	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 16:45	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/18/19 16:45	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/18/19 16:45	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/18/19 16:45	1
Toluene	<0.15		0.50	0.15	ug/L			04/18/19 16:45	1
<b>trans-1,2-Dichloroethene</b>	<b>0.65</b>	<b>J</b>	1.0	0.35	ug/L			04/18/19 16:45	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/18/19 16:45	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/18/19 16:45	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/18/19 16:45	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/18/19 16:45	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/18/19 16:45	1
<b>Trichloroethene</b>	<b>0.70</b>		0.50	0.16	ug/L			04/18/19 16:45	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/18/19 16:45	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/18/19 16:45	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/18/19 16:45	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/18/19 16:45	1
<b>Vinyl chloride</b>	<b>7.9</b>		1.0	0.20	ug/L			04/18/19 16:45	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/18/19 16:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		72 - 124		04/18/19 16:45	1
Dibromofluoromethane	99		75 - 120		04/18/19 16:45	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 126		04/18/19 16:45	1
Toluene-d8 (Surr)	102		75 - 120		04/18/19 16:45	1

**Client Sample ID: MW-18**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-5**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/18/19 17:12	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/18/19 17:12	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/18/19 17:12	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/18/19 17:12	1
Bromoform	<0.48		1.0	0.48	ug/L			04/18/19 17:12	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/18/19 17:12	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-18**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-5**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/18/19 17:12	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/18/19 17:12	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/18/19 17:12	1
Chloroform	<0.37		2.0	0.37	ug/L			04/18/19 17:12	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/18/19 17:12	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/18/19 17:12	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/18/19 17:12	1
<b>cis-1,2-Dichloroethene</b>	<b>2.2</b>		1.0	0.41	ug/L			04/18/19 17:12	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/18/19 17:12	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/18/19 17:12	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/18/19 17:12	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/18/19 17:12	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/18/19 17:12	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/18/19 17:12	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/18/19 17:12	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/18/19 17:12	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/18/19 17:12	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/18/19 17:12	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/18/19 17:12	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/18/19 17:12	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/18/19 17:12	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/18/19 17:12	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/18/19 17:12	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/18/19 17:12	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/18/19 17:12	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/18/19 17:12	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 17:12	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/18/19 17:12	1
<b>Methylene Chloride</b>	<b>2.8 J</b>		5.0	1.6	ug/L			04/18/19 17:12	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/18/19 17:12	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/18/19 17:12	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 17:12	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/18/19 17:12	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/18/19 17:12	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 17:12	1
Styrene	<0.39		1.0	0.39	ug/L			04/18/19 17:12	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 17:12	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/18/19 17:12	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/18/19 17:12	1
<b>Tetrachloroethene</b>	<b>0.50 J</b>		1.0	0.37	ug/L			04/18/19 17:12	1
Toluene	<0.15		0.50	0.15	ug/L			04/18/19 17:12	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/18/19 17:12	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/18/19 17:12	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/18/19 17:12	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/18/19 17:12	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/18/19 17:12	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/18/19 17:12	1
<b>Trichloroethene</b>	<b>0.17 J</b>		0.50	0.16	ug/L			04/18/19 17:12	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/18/19 17:12	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-18**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-5**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/18/19 17:12	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/18/19 17:12	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/18/19 17:12	1
<b>Vinyl chloride</b>	<b>0.51</b>	<b>J</b>	1.0	0.20	ug/L			04/18/19 17:12	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/18/19 17:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		72 - 124		04/18/19 17:12	1
Dibromofluoromethane	99		75 - 120		04/18/19 17:12	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 126		04/18/19 17:12	1
Toluene-d8 (Surr)	99		75 - 120		04/18/19 17:12	1

**Client Sample ID: MW-19**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-6**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/18/19 17:39	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/18/19 17:39	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/18/19 17:39	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/18/19 17:39	1
Bromoform	<0.48		1.0	0.48	ug/L			04/18/19 17:39	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/18/19 17:39	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/18/19 17:39	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/18/19 17:39	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/18/19 17:39	1
Chloroform	<0.37		2.0	0.37	ug/L			04/18/19 17:39	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/18/19 17:39	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/18/19 17:39	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/18/19 17:39	1
<b>cis-1,2-Dichloroethene</b>	<b>5.1</b>		1.0	0.41	ug/L			04/18/19 17:39	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/18/19 17:39	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/18/19 17:39	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/18/19 17:39	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/18/19 17:39	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/18/19 17:39	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/18/19 17:39	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/18/19 17:39	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/18/19 17:39	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/18/19 17:39	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/18/19 17:39	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/18/19 17:39	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/18/19 17:39	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/18/19 17:39	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/18/19 17:39	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/18/19 17:39	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/18/19 17:39	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/18/19 17:39	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/18/19 17:39	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-19**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-6**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 17:39	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/18/19 17:39	1
<b>Methylene Chloride</b>	<b>3.0</b>	<b>J</b>	5.0	1.6	ug/L			04/18/19 17:39	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/18/19 17:39	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/18/19 17:39	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 17:39	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/18/19 17:39	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/18/19 17:39	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 17:39	1
Styrene	<0.39		1.0	0.39	ug/L			04/18/19 17:39	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 17:39	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/18/19 17:39	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/18/19 17:39	1
<b>Tetrachloroethene</b>	<b>2.4</b>		1.0	0.37	ug/L			04/18/19 17:39	1
Toluene	<0.15		0.50	0.15	ug/L			04/18/19 17:39	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/18/19 17:39	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/18/19 17:39	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/18/19 17:39	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/18/19 17:39	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/18/19 17:39	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/18/19 17:39	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/18/19 17:39	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/18/19 17:39	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/18/19 17:39	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/18/19 17:39	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/18/19 17:39	1
<b>Vinyl chloride</b>	<b>3.5</b>		1.0	0.20	ug/L			04/18/19 17:39	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/18/19 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		72 - 124		04/18/19 17:39	1
Dibromofluoromethane	100		75 - 120		04/18/19 17:39	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 126		04/18/19 17:39	1
Toluene-d8 (Surr)	100		75 - 120		04/18/19 17:39	1

**Client Sample ID: MW-20**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-7**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/18/19 18:06	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/18/19 18:06	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/18/19 18:06	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/18/19 18:06	1
Bromoform	<0.48		1.0	0.48	ug/L			04/18/19 18:06	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/18/19 18:06	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/18/19 18:06	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/18/19 18:06	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/18/19 18:06	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-20**

**Lab Sample ID: 500-161349-7**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	<0.37		2.0	0.37	ug/L			04/18/19 18:06	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/18/19 18:06	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/18/19 18:06	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/18/19 18:06	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/18/19 18:06	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/18/19 18:06	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/18/19 18:06	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/18/19 18:06	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/18/19 18:06	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/18/19 18:06	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/18/19 18:06	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/18/19 18:06	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/18/19 18:06	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/18/19 18:06	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/18/19 18:06	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/18/19 18:06	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/18/19 18:06	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/18/19 18:06	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/18/19 18:06	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/18/19 18:06	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/18/19 18:06	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/18/19 18:06	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/18/19 18:06	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 18:06	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/18/19 18:06	1
<b>Methylene Chloride</b>	<b>3.1 J</b>		5.0	1.6	ug/L			04/18/19 18:06	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/18/19 18:06	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/18/19 18:06	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 18:06	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/18/19 18:06	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/18/19 18:06	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 18:06	1
Styrene	<0.39		1.0	0.39	ug/L			04/18/19 18:06	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 18:06	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/18/19 18:06	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/18/19 18:06	1
<b>Tetrachloroethene</b>	<b>3.6</b>		1.0	0.37	ug/L			04/18/19 18:06	1
Toluene	<0.15		0.50	0.15	ug/L			04/18/19 18:06	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/18/19 18:06	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/18/19 18:06	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/18/19 18:06	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/18/19 18:06	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/18/19 18:06	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/18/19 18:06	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/18/19 18:06	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/18/19 18:06	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/18/19 18:06	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/18/19 18:06	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/18/19 18:06	1

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-20**  
**Date Collected: 04/08/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-7**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/18/19 18:06	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/18/19 18:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		72 - 124					04/18/19 18:06	1
Dibromofluoromethane	99		75 - 120					04/18/19 18:06	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 126					04/18/19 18:06	1
Toluene-d8 (Surr)	99		75 - 120					04/18/19 18:06	1

**Client Sample ID: MW-21**  
**Date Collected: 04/08/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-8**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/18/19 18:33	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/18/19 18:33	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/18/19 18:33	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/18/19 18:33	1
Bromoform	<0.48		1.0	0.48	ug/L			04/18/19 18:33	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/18/19 18:33	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/18/19 18:33	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/18/19 18:33	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/18/19 18:33	1
Chloroform	<0.37		2.0	0.37	ug/L			04/18/19 18:33	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/18/19 18:33	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/18/19 18:33	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/18/19 18:33	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/18/19 18:33	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/18/19 18:33	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/18/19 18:33	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/18/19 18:33	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/18/19 18:33	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/18/19 18:33	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/18/19 18:33	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/18/19 18:33	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/18/19 18:33	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/18/19 18:33	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/18/19 18:33	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/18/19 18:33	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/18/19 18:33	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/18/19 18:33	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/18/19 18:33	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/18/19 18:33	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/18/19 18:33	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/18/19 18:33	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/18/19 18:33	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 18:33	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/18/19 18:33	1
<b>Methylene Chloride</b>	<b>2.9 J</b>		5.0	1.6	ug/L			04/18/19 18:33	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-21**

**Lab Sample ID: 500-161349-8**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/18/19 18:33	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/18/19 18:33	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 18:33	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/18/19 18:33	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/18/19 18:33	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 18:33	1
Styrene	<0.39		1.0	0.39	ug/L			04/18/19 18:33	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 18:33	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/18/19 18:33	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/18/19 18:33	1
<b>Tetrachloroethene</b>	<b>7.5</b>		1.0	0.37	ug/L			04/18/19 18:33	1
Toluene	<0.15		0.50	0.15	ug/L			04/18/19 18:33	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/18/19 18:33	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/18/19 18:33	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/18/19 18:33	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/18/19 18:33	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/18/19 18:33	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/18/19 18:33	1
<b>Trichloroethene</b>	<b>0.19 J</b>		0.50	0.16	ug/L			04/18/19 18:33	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/18/19 18:33	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/18/19 18:33	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/18/19 18:33	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/18/19 18:33	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/18/19 18:33	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/18/19 18:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		72 - 124		04/18/19 18:33	1
Dibromofluoromethane	101		75 - 120		04/18/19 18:33	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 126		04/18/19 18:33	1
Toluene-d8 (Surr)	99		75 - 120		04/18/19 18:33	1

**Client Sample ID: MW-21A**

**Lab Sample ID: 500-161349-9**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 01:39	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 01:39	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 01:39	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 01:39	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 01:39	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 01:39	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 01:39	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 01:39	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 01:39	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 01:39	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 01:39	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 01:39	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-21A**

**Lab Sample ID: 500-161349-9**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 01:39	1
<b>cis-1,2-Dichloroethene</b>	<b>32</b>		1.0	0.41	ug/L			04/19/19 01:39	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 01:39	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 01:39	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 01:39	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 01:39	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 01:39	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 01:39	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 01:39	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 01:39	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 01:39	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 01:39	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 01:39	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 01:39	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 01:39	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 01:39	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 01:39	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 01:39	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 01:39	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 01:39	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 01:39	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 01:39	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 01:39	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 01:39	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 01:39	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 01:39	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 01:39	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 01:39	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 01:39	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 01:39	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 01:39	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 01:39	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 01:39	1
<b>Tetrachloroethene</b>	<b>0.82 J</b>		1.0	0.37	ug/L			04/19/19 01:39	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 01:39	1
<b>trans-1,2-Dichloroethene</b>	<b>0.54 J</b>		1.0	0.35	ug/L			04/19/19 01:39	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 01:39	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 01:39	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 01:39	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 01:39	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 01:39	1
<b>Trichloroethene</b>	<b>2.3</b>		0.50	0.16	ug/L			04/19/19 01:39	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 01:39	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 01:39	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 01:39	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 01:39	1
<b>Vinyl chloride</b>	<b>3.0</b>		1.0	0.20	ug/L			04/19/19 01:39	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 01:39	1



# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Client Sample ID: MW-21A

Date Collected: 04/08/19 00:00

Date Received: 04/10/19 09:20

## Lab Sample ID: 500-161349-9

Matrix: Ground Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		72 - 124		04/19/19 01:39	1
Dibromofluoromethane	96		75 - 120		04/19/19 01:39	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		04/19/19 01:39	1
Toluene-d8 (Surr)	92		75 - 120		04/19/19 01:39	1

## Client Sample ID: B-1

Date Collected: 04/08/19 00:00

Date Received: 04/10/19 09:20

## Lab Sample ID: 500-161349-10

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 02:04	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 02:04	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 02:04	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 02:04	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 02:04	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 02:04	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 02:04	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 02:04	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 02:04	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 02:04	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 02:04	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 02:04	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 02:04	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 02:04	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 02:04	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 02:04	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 02:04	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 02:04	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 02:04	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 02:04	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 02:04	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 02:04	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 02:04	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 02:04	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 02:04	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 02:04	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 02:04	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 02:04	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 02:04	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 02:04	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 02:04	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 02:04	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 02:04	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 02:04	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 02:04	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 02:04	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 02:04	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 02:04	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 02:04	1

Eurolins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-1**

**Lab Sample ID: 500-161349-10**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 02:04	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 02:04	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 02:04	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 02:04	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 02:04	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 02:04	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/19/19 02:04	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 02:04	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 02:04	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 02:04	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 02:04	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 02:04	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 02:04	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 02:04	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/19/19 02:04	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 02:04	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 02:04	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 02:04	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 02:04	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 02:04	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 02:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		72 - 124		04/19/19 02:04	1
Dibromofluoromethane	97		75 - 120		04/19/19 02:04	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 126		04/19/19 02:04	1
Toluene-d8 (Surr)	91		75 - 120		04/19/19 02:04	1

**Client Sample ID: B-1A**

**Lab Sample ID: 500-161349-11**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 02:29	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 02:29	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 02:29	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 02:29	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 02:29	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 02:29	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 02:29	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 02:29	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 02:29	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 02:29	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 02:29	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 02:29	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 02:29	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 02:29	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 02:29	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 02:29	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-1A**  
**Date Collected: 04/08/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-11**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 02:29	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 02:29	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 02:29	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 02:29	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 02:29	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 02:29	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 02:29	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 02:29	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 02:29	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 02:29	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 02:29	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 02:29	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 02:29	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 02:29	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 02:29	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 02:29	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 02:29	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 02:29	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 02:29	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 02:29	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 02:29	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 02:29	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 02:29	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 02:29	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 02:29	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 02:29	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 02:29	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 02:29	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 02:29	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/19/19 02:29	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 02:29	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 02:29	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 02:29	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 02:29	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 02:29	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 02:29	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 02:29	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/19/19 02:29	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 02:29	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 02:29	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 02:29	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 02:29	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 02:29	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 02:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		72 - 124		04/19/19 02:29	1
Dibromofluoromethane	98		75 - 120		04/19/19 02:29	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 126		04/19/19 02:29	1
Toluene-d8 (Surr)	92		75 - 120		04/19/19 02:29	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-1B**

**Lab Sample ID: 500-161349-12**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 02:54	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 02:54	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 02:54	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 02:54	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 02:54	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 02:54	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 02:54	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 02:54	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 02:54	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 02:54	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 02:54	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 02:54	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 02:54	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 02:54	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 02:54	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 02:54	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 02:54	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 02:54	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 02:54	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 02:54	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 02:54	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 02:54	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 02:54	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 02:54	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 02:54	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 02:54	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 02:54	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 02:54	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 02:54	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 02:54	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 02:54	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 02:54	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 02:54	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 02:54	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 02:54	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 02:54	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 02:54	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 02:54	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 02:54	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 02:54	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 02:54	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 02:54	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 02:54	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 02:54	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 02:54	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/19/19 02:54	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 02:54	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 02:54	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 02:54	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-1B**

**Lab Sample ID: 500-161349-12**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 02:54	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 02:54	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 02:54	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 02:54	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/19/19 02:54	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 02:54	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 02:54	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 02:54	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 02:54	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 02:54	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 02:54	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	115		72 - 124					04/19/19 02:54	1
Dibromofluoromethane	94		75 - 120					04/19/19 02:54	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 126					04/19/19 02:54	1
Toluene-d8 (Surr)	93		75 - 120					04/19/19 02:54	1

**Client Sample ID: B-3**

**Lab Sample ID: 500-161349-13**

**Date Collected: 04/09/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 03:19	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 03:19	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 03:19	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 03:19	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 03:19	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 03:19	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 03:19	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 03:19	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 03:19	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 03:19	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 03:19	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 03:19	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 03:19	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 03:19	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 03:19	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 03:19	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 03:19	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 03:19	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 03:19	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 03:19	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 03:19	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 03:19	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 03:19	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 03:19	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 03:19	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 03:19	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-3**

**Lab Sample ID: 500-161349-13**

Date Collected: 04/09/19 00:00

Matrix: Ground Water

Date Received: 04/10/19 09:20

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 03:19	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 03:19	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 03:19	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 03:19	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 03:19	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 03:19	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 03:19	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 03:19	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 03:19	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 03:19	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 03:19	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 03:19	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 03:19	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 03:19	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 03:19	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 03:19	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 03:19	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 03:19	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 03:19	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/19/19 03:19	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 03:19	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 03:19	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 03:19	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 03:19	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 03:19	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 03:19	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 03:19	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/19/19 03:19	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 03:19	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 03:19	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 03:19	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 03:19	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 03:19	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 03:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		72 - 124		04/19/19 03:19	1
Dibromofluoromethane	95		75 - 120		04/19/19 03:19	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		04/19/19 03:19	1
Toluene-d8 (Surr)	95		75 - 120		04/19/19 03:19	1

**Client Sample ID: B-3A**

**Lab Sample ID: 500-161349-14**

Date Collected: 04/09/19 00:00

Matrix: Ground Water

Date Received: 04/10/19 09:20

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 03:44	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 03:44	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 03:44	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-3A**  
**Date Collected: 04/09/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-14**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 03:44	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 03:44	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 03:44	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 03:44	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 03:44	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 03:44	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 03:44	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 03:44	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 03:44	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 03:44	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 03:44	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 03:44	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 03:44	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 03:44	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 03:44	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 03:44	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 03:44	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 03:44	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 03:44	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 03:44	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 03:44	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 03:44	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 03:44	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 03:44	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 03:44	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 03:44	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 03:44	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 03:44	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 03:44	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 03:44	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 03:44	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 03:44	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 03:44	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 03:44	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 03:44	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 03:44	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 03:44	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 03:44	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 03:44	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 03:44	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 03:44	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 03:44	1
<b>Tetrachloroethene</b>	<b>0.71</b>	<b>J</b>	1.0	0.37	ug/L			04/19/19 03:44	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 03:44	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 03:44	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 03:44	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 03:44	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 03:44	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 03:44	1

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-3A**  
**Date Collected: 04/09/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-14**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 03:44	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/19/19 03:44	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 03:44	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 03:44	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 03:44	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 03:44	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 03:44	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 03:44	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	114		72 - 124					04/19/19 03:44	1
Dibromofluoromethane	96		75 - 120					04/19/19 03:44	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126					04/19/19 03:44	1
Toluene-d8 (Surr)	92		75 - 120					04/19/19 03:44	1

**Client Sample ID: B-10**  
**Date Collected: 04/08/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-15**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 04:10	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 04:10	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 04:10	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 04:10	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 04:10	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 04:10	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 04:10	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 04:10	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 04:10	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 04:10	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 04:10	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 04:10	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 04:10	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 04:10	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 04:10	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 04:10	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 04:10	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 04:10	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 04:10	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 04:10	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 04:10	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 04:10	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 04:10	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 04:10	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 04:10	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 04:10	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 04:10	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 04:10	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 04:10	1

Eurofins TestAmerica, Chicago



# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-10**

**Lab Sample ID: 500-161349-15**

Date Collected: 04/08/19 00:00

Matrix: Ground Water

Date Received: 04/10/19 09:20

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 04:10	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 04:10	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 04:10	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 04:10	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 04:10	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 04:10	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 04:10	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 04:10	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 04:10	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 04:10	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 04:10	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 04:10	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 04:10	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 04:10	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 04:10	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 04:10	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/19/19 04:10	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 04:10	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 04:10	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 04:10	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 04:10	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 04:10	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 04:10	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 04:10	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/19/19 04:10	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 04:10	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 04:10	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 04:10	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 04:10	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 04:10	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 04:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		72 - 124		04/19/19 04:10	1
Dibromofluoromethane	95		75 - 120		04/19/19 04:10	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 126		04/19/19 04:10	1
Toluene-d8 (Surr)	92		75 - 120		04/19/19 04:10	1

**Client Sample ID: B-11**

**Lab Sample ID: 500-161349-16**

Date Collected: 04/08/19 00:00

Matrix: Ground Water

Date Received: 04/10/19 09:20

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 04:35	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 04:35	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 04:35	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 04:35	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 04:35	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 04:35	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-11**

**Lab Sample ID: 500-161349-16**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 04:35	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 04:35	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 04:35	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 04:35	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 04:35	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 04:35	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 04:35	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 04:35	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 04:35	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 04:35	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 04:35	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 04:35	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 04:35	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 04:35	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 04:35	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 04:35	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 04:35	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 04:35	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 04:35	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 04:35	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 04:35	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 04:35	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 04:35	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 04:35	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 04:35	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 04:35	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 04:35	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 04:35	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 04:35	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 04:35	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 04:35	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 04:35	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 04:35	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 04:35	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 04:35	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 04:35	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 04:35	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 04:35	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 04:35	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/19/19 04:35	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 04:35	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 04:35	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 04:35	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 04:35	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 04:35	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 04:35	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 04:35	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/19/19 04:35	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 04:35	1

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Client Sample ID: B-11

Date Collected: 04/08/19 00:00

Date Received: 04/10/19 09:20

## Lab Sample ID: 500-161349-16

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 04:35	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 04:35	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 04:35	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 04:35	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 04:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		72 - 124		04/19/19 04:35	1
Dibromofluoromethane	98		75 - 120		04/19/19 04:35	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 126		04/19/19 04:35	1
Toluene-d8 (Surr)	90		75 - 120		04/19/19 04:35	1

## Client Sample ID: B-12

Date Collected: 04/08/19 00:00

Date Received: 04/10/19 09:20

## Lab Sample ID: 500-161349-17

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 05:01	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 05:01	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 05:01	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 05:01	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 05:01	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 05:01	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 05:01	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 05:01	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 05:01	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 05:01	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 05:01	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 05:01	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 05:01	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 05:01	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 05:01	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 05:01	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 05:01	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 05:01	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 05:01	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 05:01	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 05:01	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 05:01	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 05:01	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 05:01	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 05:01	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 05:01	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 05:01	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 05:01	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 05:01	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 05:01	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 05:01	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 05:01	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-12**

**Lab Sample ID: 500-161349-17**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 05:01	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 05:01	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 05:01	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 05:01	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 05:01	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 05:01	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 05:01	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 05:01	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 05:01	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 05:01	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 05:01	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 05:01	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 05:01	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/19/19 05:01	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 05:01	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 05:01	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 05:01	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 05:01	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 05:01	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 05:01	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 05:01	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/19/19 05:01	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 05:01	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 05:01	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 05:01	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 05:01	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 05:01	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 05:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		72 - 124		04/19/19 05:01	1
Dibromofluoromethane	97		75 - 120		04/19/19 05:01	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 126		04/19/19 05:01	1
Toluene-d8 (Surr)	90		75 - 120		04/19/19 05:01	1

**Client Sample ID: B-13**

**Lab Sample ID: 500-161349-18**

**Date Collected: 04/09/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 05:26	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 05:26	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 05:26	1
<b>Bromodichloromethane</b>	<b>0.73</b>	<b>J</b>	1.0	0.37	ug/L			04/19/19 05:26	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 05:26	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 05:26	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 05:26	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 05:26	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 05:26	1

Euromins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-13**

**Lab Sample ID: 500-161349-18**

Date Collected: 04/09/19 00:00

Matrix: Ground Water

Date Received: 04/10/19 09:20

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloroform</b>	<b>6.5</b>		2.0	0.37	ug/L			04/19/19 05:26	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 05:26	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 05:26	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 05:26	1
<b>cis-1,2-Dichloroethene</b>	<b>44</b>		1.0	0.41	ug/L			04/19/19 05:26	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 05:26	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 05:26	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 05:26	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 05:26	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 05:26	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 05:26	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 05:26	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 05:26	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 05:26	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 05:26	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 05:26	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 05:26	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 05:26	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 05:26	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 05:26	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 05:26	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 05:26	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 05:26	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 05:26	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 05:26	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 05:26	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 05:26	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 05:26	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 05:26	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 05:26	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 05:26	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 05:26	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 05:26	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 05:26	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 05:26	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 05:26	1
<b>Tetrachloroethene</b>	<b>44</b>		1.0	0.37	ug/L			04/19/19 05:26	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 05:26	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 05:26	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 05:26	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 05:26	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 05:26	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 05:26	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 05:26	1
<b>Trichloroethene</b>	<b>28</b>		0.50	0.16	ug/L			04/19/19 05:26	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 05:26	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 05:26	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 05:26	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 05:26	1

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Client Sample ID: B-13

Date Collected: 04/09/19 00:00

Date Received: 04/10/19 09:20

## Lab Sample ID: 500-161349-18

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 05:26	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 05:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		72 - 124					04/19/19 05:26	1
Dibromofluoromethane	96		75 - 120					04/19/19 05:26	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126					04/19/19 05:26	1
Toluene-d8 (Surr)	93		75 - 120					04/19/19 05:26	1

## Client Sample ID: B-13A

Date Collected: 04/09/19 00:00

Date Received: 04/10/19 09:20

## Lab Sample ID: 500-161349-19

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 05:51	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 05:51	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 05:51	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 05:51	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 05:51	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 05:51	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 05:51	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 05:51	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 05:51	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 05:51	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 05:51	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 05:51	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 05:51	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 05:51	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 05:51	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 05:51	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 05:51	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 05:51	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 05:51	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 05:51	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 05:51	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 05:51	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 05:51	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 05:51	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 05:51	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 05:51	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 05:51	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 05:51	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 05:51	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 05:51	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 05:51	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 05:51	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 05:51	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 05:51	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 05:51	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-13A**

**Lab Sample ID: 500-161349-19**

**Date Collected: 04/09/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 05:51	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 05:51	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 05:51	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 05:51	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 05:51	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 05:51	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 05:51	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 05:51	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 05:51	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 05:51	1
<b>Tetrachloroethene</b>	<b>0.50</b>	<b>J</b>	1.0	0.37	ug/L			04/19/19 05:51	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 05:51	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 05:51	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 05:51	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 05:51	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 05:51	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 05:51	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 05:51	1
<b>Trichloroethene</b>	<b>0.19</b>	<b>J</b>	0.50	0.16	ug/L			04/19/19 05:51	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 05:51	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 05:51	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 05:51	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 05:51	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 05:51	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 05:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		72 - 124		04/19/19 05:51	1
Dibromofluoromethane	98		75 - 120		04/19/19 05:51	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 126		04/19/19 05:51	1
Toluene-d8 (Surr)	90		75 - 120		04/19/19 05:51	1

**Client Sample ID: B-13B**

**Lab Sample ID: 500-161349-20**

**Date Collected: 04/09/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 06:17	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 06:17	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 06:17	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 06:17	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 06:17	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 06:17	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 06:17	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 06:17	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 06:17	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 06:17	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 06:17	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 06:17	1

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# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-13B**

**Lab Sample ID: 500-161349-20**

Date Collected: 04/09/19 00:00

Matrix: Ground Water

Date Received: 04/10/19 09:20

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 06:17	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 06:17	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 06:17	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 06:17	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 06:17	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 06:17	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 06:17	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 06:17	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 06:17	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 06:17	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 06:17	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 06:17	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 06:17	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 06:17	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 06:17	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 06:17	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 06:17	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 06:17	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 06:17	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 06:17	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 06:17	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 06:17	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 06:17	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 06:17	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 06:17	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 06:17	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 06:17	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 06:17	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 06:17	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 06:17	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 06:17	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 06:17	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 06:17	1
<b>Tetrachloroethene</b>	<b>1.7</b>		1.0	0.37	ug/L			04/19/19 06:17	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 06:17	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 06:17	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 06:17	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 06:17	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 06:17	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 06:17	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 06:17	1
<b>Trichloroethene</b>	<b>0.57</b>		0.50	0.16	ug/L			04/19/19 06:17	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 06:17	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 06:17	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 06:17	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 06:17	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 06:17	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 06:17	1



# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Client Sample ID: B-13B

Date Collected: 04/09/19 00:00

Date Received: 04/10/19 09:20

## Lab Sample ID: 500-161349-20

Matrix: Ground Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		72 - 124		04/19/19 06:17	1
Dibromofluoromethane	96		75 - 120		04/19/19 06:17	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 126		04/19/19 06:17	1
Toluene-d8 (Surr)	92		75 - 120		04/19/19 06:17	1

## Client Sample ID: MW-18A

Date Collected: 04/08/19 00:00

Date Received: 04/10/19 09:20

## Lab Sample ID: 500-161349-21

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 06:42	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 06:42	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 06:42	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 06:42	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 06:42	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 06:42	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 06:42	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 06:42	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 06:42	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 06:42	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 06:42	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 06:42	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 06:42	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 06:42	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 06:42	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 06:42	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 06:42	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 06:42	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 06:42	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 06:42	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 06:42	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 06:42	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 06:42	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 06:42	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 06:42	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 06:42	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 06:42	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 06:42	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 06:42	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 06:42	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 06:42	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 06:42	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 06:42	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 06:42	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 06:42	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 06:42	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 06:42	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 06:42	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 06:42	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-18A**

**Lab Sample ID: 500-161349-21**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 06:42	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 06:42	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 06:42	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 06:42	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 06:42	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 06:42	1
<b>Tetrachloroethene</b>	<b>0.75</b>	<b>J</b>	1.0	0.37	ug/L			04/19/19 06:42	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 06:42	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 06:42	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 06:42	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 06:42	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 06:42	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 06:42	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 06:42	1
<b>Trichloroethene</b>	<b>0.85</b>		0.50	0.16	ug/L			04/19/19 06:42	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 06:42	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 06:42	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 06:42	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 06:42	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 06:42	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 06:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		72 - 124		04/19/19 06:42	1
Dibromofluoromethane	96		75 - 120		04/19/19 06:42	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 126		04/19/19 06:42	1
Toluene-d8 (Surr)	93		75 - 120		04/19/19 06:42	1

**Client Sample ID: MW-19A**

**Lab Sample ID: 500-161349-22**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 12:52	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 12:52	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 12:52	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 12:52	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 12:52	1
Bromomethane	<0.80	*	3.0	0.80	ug/L			04/19/19 12:52	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 12:52	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 12:52	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 12:52	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 12:52	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 12:52	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 12:52	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 12:52	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 12:52	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 12:52	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 12:52	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-19A**

**Lab Sample ID: 500-161349-22**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 12:52	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 12:52	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 12:52	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 12:52	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 12:52	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 12:52	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 12:52	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 12:52	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 12:52	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 12:52	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 12:52	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 12:52	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 12:52	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 12:52	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 12:52	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 12:52	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 12:52	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 12:52	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 12:52	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 12:52	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 12:52	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 12:52	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 12:52	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 12:52	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 12:52	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 12:52	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 12:52	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 12:52	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 12:52	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/19/19 12:52	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 12:52	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 12:52	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 12:52	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 12:52	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 12:52	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 12:52	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 12:52	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/19/19 12:52	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 12:52	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 12:52	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 12:52	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 12:52	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 12:52	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 12:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		72 - 124		04/19/19 12:52	1
Dibromofluoromethane	90		75 - 120		04/19/19 12:52	1
1,2-Dichloroethane-d4 (Surr)	115		75 - 126		04/19/19 12:52	1
Toluene-d8 (Surr)	90		75 - 120		04/19/19 12:52	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: Discharge Pipe**

**Lab Sample ID: 500-161349-23**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 13:18	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 13:18	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 13:18	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 13:18	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 13:18	1
Bromomethane	<0.80	*	3.0	0.80	ug/L			04/19/19 13:18	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 13:18	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 13:18	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 13:18	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 13:18	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 13:18	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 13:18	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 13:18	1
<b>cis-1,2-Dichloroethene</b>	<b>1.6</b>		1.0	0.41	ug/L			04/19/19 13:18	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 13:18	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 13:18	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 13:18	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 13:18	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 13:18	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 13:18	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 13:18	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 13:18	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 13:18	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 13:18	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 13:18	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 13:18	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 13:18	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 13:18	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 13:18	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 13:18	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 13:18	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 13:18	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 13:18	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 13:18	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 13:18	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 13:18	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 13:18	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 13:18	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 13:18	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 13:18	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 13:18	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 13:18	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 13:18	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 13:18	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 13:18	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/19/19 13:18	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 13:18	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 13:18	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 13:18	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: Discharge Pipe**

**Lab Sample ID: 500-161349-23**

Date Collected: 04/08/19 00:00

Matrix: Ground Water

Date Received: 04/10/19 09:20

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 13:18	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 13:18	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 13:18	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 13:18	1
<b>Trichloroethene</b>	<b>0.77</b>		0.50	0.16	ug/L			04/19/19 13:18	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 13:18	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 13:18	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 13:18	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 13:18	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 13:18	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 13:18	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	110		72 - 124					04/19/19 13:18	1
Dibromofluoromethane	91		75 - 120					04/19/19 13:18	1
1,2-Dichloroethane-d4 (Surr)	110		75 - 126					04/19/19 13:18	1
Toluene-d8 (Surr)	90		75 - 120					04/19/19 13:18	1

**Client Sample ID: B-1B Dup**

**Lab Sample ID: 500-161349-24**

Date Collected: 04/08/19 00:00

Matrix: Ground Water

Date Received: 04/10/19 09:20

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 13:44	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 13:44	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 13:44	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 13:44	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 13:44	1
Bromomethane	<0.80 *		3.0	0.80	ug/L			04/19/19 13:44	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 13:44	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 13:44	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 13:44	1
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 13:44	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 13:44	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 13:44	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 13:44	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 13:44	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 13:44	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 13:44	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 13:44	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 13:44	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 13:44	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 13:44	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 13:44	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 13:44	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 13:44	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 13:44	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 13:44	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 13:44	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-1B Dup**

**Lab Sample ID: 500-161349-24**

**Date Collected: 04/08/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 13:44	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 13:44	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 13:44	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 13:44	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 13:44	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 13:44	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 13:44	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 13:44	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 13:44	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 13:44	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 13:44	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 13:44	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 13:44	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 13:44	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 13:44	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 13:44	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 13:44	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 13:44	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 13:44	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/19/19 13:44	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 13:44	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 13:44	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 13:44	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 13:44	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 13:44	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 13:44	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 13:44	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/19/19 13:44	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 13:44	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 13:44	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 13:44	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 13:44	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 13:44	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 13:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		72 - 124		04/19/19 13:44	1
Dibromofluoromethane	91		75 - 120		04/19/19 13:44	1
1,2-Dichloroethane-d4 (Surr)	114		75 - 126		04/19/19 13:44	1
Toluene-d8 (Surr)	89		75 - 120		04/19/19 13:44	1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-161349-25**

**Date Collected: 04/09/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/18/19 22:42	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/18/19 22:42	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/18/19 22:42	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-161349-25**

**Date Collected: 04/09/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/18/19 22:42	1
Bromoform	<0.48		1.0	0.48	ug/L			04/18/19 22:42	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/18/19 22:42	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/18/19 22:42	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/18/19 22:42	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/18/19 22:42	1
Chloroform	<0.37		2.0	0.37	ug/L			04/18/19 22:42	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/18/19 22:42	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/18/19 22:42	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/18/19 22:42	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/18/19 22:42	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/18/19 22:42	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/18/19 22:42	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/18/19 22:42	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/18/19 22:42	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/18/19 22:42	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/18/19 22:42	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/18/19 22:42	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/18/19 22:42	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/18/19 22:42	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/18/19 22:42	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/18/19 22:42	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/18/19 22:42	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/18/19 22:42	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/18/19 22:42	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/18/19 22:42	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/18/19 22:42	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/18/19 22:42	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/18/19 22:42	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 22:42	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/18/19 22:42	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/18/19 22:42	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/18/19 22:42	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/18/19 22:42	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 22:42	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/18/19 22:42	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/18/19 22:42	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 22:42	1
Styrene	<0.39		1.0	0.39	ug/L			04/18/19 22:42	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 22:42	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/18/19 22:42	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/18/19 22:42	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/18/19 22:42	1
Toluene	<0.15		0.50	0.15	ug/L			04/18/19 22:42	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/18/19 22:42	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/18/19 22:42	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/18/19 22:42	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/18/19 22:42	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/18/19 22:42	1

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-161349-25**

**Date Collected: 04/09/19 00:00**

**Matrix: Ground Water**

**Date Received: 04/10/19 09:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/18/19 22:42	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/18/19 22:42	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/18/19 22:42	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/18/19 22:42	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/18/19 22:42	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/18/19 22:42	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/18/19 22:42	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/18/19 22:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		72 - 124		04/18/19 22:42	1
Dibromofluoromethane	91		75 - 120		04/18/19 22:42	1
1,2-Dichloroethane-d4 (Surr)	101		75 - 126		04/18/19 22:42	1
Toluene-d8 (Surr)	95		75 - 120		04/18/19 22:42	1



# Definitions/Glossary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Association Summary

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## GC/MS VOA

### Analysis Batch: 481051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-161349-1	EXW-4	Total/NA	Ground Water	8260B	
500-161349-2	EXW-6	Total/NA	Ground Water	8260B	
500-161349-3	Muni #3	Total/NA	Ground Water	8260B	
500-161349-4	MW-17	Total/NA	Ground Water	8260B	
500-161349-5	MW-18	Total/NA	Ground Water	8260B	
500-161349-6	MW-19	Total/NA	Ground Water	8260B	
500-161349-7	MW-20	Total/NA	Ground Water	8260B	
500-161349-8	MW-21	Total/NA	Ground Water	8260B	
MB 500-481051/7	Method Blank	Total/NA	Water	8260B	
LCS 500-481051/5	Lab Control Sample	Total/NA	Water	8260B	
500-161349-8 MS	MW-21	Total/NA	Ground Water	8260B	
500-161349-8 MSD	MW-21	Total/NA	Ground Water	8260B	

### Analysis Batch: 481182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-161349-9	MW-21A	Total/NA	Ground Water	8260B	
500-161349-10	B-1	Total/NA	Ground Water	8260B	
500-161349-11	B-1A	Total/NA	Ground Water	8260B	
500-161349-12	B-1B	Total/NA	Ground Water	8260B	
500-161349-13	B-3	Total/NA	Ground Water	8260B	
500-161349-14	B-3A	Total/NA	Ground Water	8260B	
500-161349-15	B-10	Total/NA	Ground Water	8260B	
500-161349-16	B-11	Total/NA	Ground Water	8260B	
500-161349-17	B-12	Total/NA	Ground Water	8260B	
500-161349-18	B-13	Total/NA	Ground Water	8260B	
500-161349-19	B-13A	Total/NA	Ground Water	8260B	
500-161349-20	B-13B	Total/NA	Ground Water	8260B	
500-161349-21	MW-18A	Total/NA	Ground Water	8260B	
500-161349-25	Trip Blank	Total/NA	Ground Water	8260B	
MB 500-481182/6	Method Blank	Total/NA	Water	8260B	
LCS 500-481182/4	Lab Control Sample	Total/NA	Water	8260B	
500-161349-21 MS	MW-18A	Total/NA	Ground Water	8260B	
500-161349-21 MSD	MW-18A	Total/NA	Ground Water	8260B	

### Analysis Batch: 481246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-161349-22	MW-19A	Total/NA	Ground Water	8260B	
500-161349-23	Discharge Pipe	Total/NA	Ground Water	8260B	
500-161349-24	B-1B Dup	Total/NA	Ground Water	8260B	
MB 500-481246/6	Method Blank	Total/NA	Water	8260B	
LCS 500-481246/4	Lab Control Sample	Total/NA	Water	8260B	

# Surrogate Summary

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Ground Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (72-124)	DBFM (75-120)	DCA (75-126)	TOL (75-120)
500-161349-1	EXW-4	109	98	103	101
500-161349-2	EXW-6	113	97	103	102
500-161349-3	Muni #3	113	99	104	101
500-161349-4	MW-17	114	99	107	102
500-161349-5	MW-18	109	99	105	99
500-161349-6	MW-19	111	100	105	100
500-161349-7	MW-20	110	99	106	99
500-161349-8	MW-21	112	101	107	99
500-161349-8 MS	MW-21	107	102	104	98
500-161349-8 MSD	MW-21	106	104	104	96
500-161349-9	MW-21A	115	96	103	92
500-161349-10	B-1	115	97	107	91
500-161349-11	B-1A	115	98	105	92
500-161349-12	B-1B	115	94	104	93
500-161349-13	B-3	116	95	103	95
500-161349-14	B-3A	114	96	103	92
500-161349-15	B-10	117	95	104	92
500-161349-16	B-11	116	98	106	90
500-161349-17	B-12	115	97	106	90
500-161349-18	B-13	114	96	103	93
500-161349-19	B-13A	115	98	106	90
500-161349-20	B-13B	117	96	104	92
500-161349-21	MW-18A	117	96	106	93
500-161349-21 MS	MW-18A	107	98	104	93
500-161349-21 MSD	MW-18A	107	97	104	91
500-161349-22	MW-19A	110	90	115	90
500-161349-23	Discharge Pipe	110	91	110	90
500-161349-24	B-1B Dup	111	91	114	89
500-161349-25	Trip Blank	113	91	101	95

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)  
 DBFM = Dibromofluoromethane  
 DCA = 1,2-Dichloroethane-d4 (Surr)  
 TOL = Toluene-d8 (Surr)

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (72-124)	DBFM (75-120)	DCA (75-126)	TOL (75-120)
LCS 500-481051/5	Lab Control Sample	101	102	105	100
LCS 500-481182/4	Lab Control Sample	104	95	101	95
LCS 500-481246/4	Lab Control Sample	113	91	107	90
MB 500-481051/7	Method Blank	112	98	103	102
MB 500-481182/6	Method Blank	112	95	104	93
MB 500-481246/6	Method Blank	112	90	113	90

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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# Surrogate Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019  
DBFM = Dibromofluoromethane  
DCA = 1,2-Dichloroethane-d4 (Surr)  
TOL = Toluene-d8 (Surr)

Job ID: 500-161349-1

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# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-481051/7**  
**Matrix: Water**  
**Analysis Batch: 481051**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	<0.15		0.50	0.15	ug/L			04/18/19 10:53	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/18/19 10:53	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/18/19 10:53	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/18/19 10:53	1
Bromoform	<0.48		1.0	0.48	ug/L			04/18/19 10:53	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/18/19 10:53	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/18/19 10:53	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/18/19 10:53	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/18/19 10:53	1
Chloroform	<0.37		2.0	0.37	ug/L			04/18/19 10:53	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/18/19 10:53	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/18/19 10:53	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/18/19 10:53	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/18/19 10:53	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/18/19 10:53	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/18/19 10:53	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/18/19 10:53	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/18/19 10:53	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/18/19 10:53	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/18/19 10:53	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/18/19 10:53	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/18/19 10:53	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/18/19 10:53	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/18/19 10:53	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/18/19 10:53	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/18/19 10:53	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/18/19 10:53	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/18/19 10:53	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/18/19 10:53	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/18/19 10:53	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/18/19 10:53	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/18/19 10:53	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 10:53	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/18/19 10:53	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/18/19 10:53	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/18/19 10:53	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/18/19 10:53	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 10:53	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/18/19 10:53	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/18/19 10:53	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 10:53	1
Styrene	<0.39		1.0	0.39	ug/L			04/18/19 10:53	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 10:53	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/18/19 10:53	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/18/19 10:53	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/18/19 10:53	1
Toluene	<0.15		0.50	0.15	ug/L			04/18/19 10:53	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/18/19 10:53	1

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-481051/7**  
**Matrix: Water**  
**Analysis Batch: 481051**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/18/19 10:53	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/18/19 10:53	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/18/19 10:53	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/18/19 10:53	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/18/19 10:53	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/18/19 10:53	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/18/19 10:53	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/18/19 10:53	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/18/19 10:53	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/18/19 10:53	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/18/19 10:53	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/18/19 10:53	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	112		72 - 124		04/18/19 10:53	1
Dibromofluoromethane	98		75 - 120		04/18/19 10:53	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		04/18/19 10:53	1
Toluene-d8 (Surr)	102		75 - 120		04/18/19 10:53	1

**Lab Sample ID: LCS 500-481051/5**  
**Matrix: Water**  
**Analysis Batch: 481051**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	50.0	47.5		ug/L		95	70 - 122
Bromochloromethane	50.0	50.6		ug/L		101	65 - 122
Bromodichloromethane	50.0	50.2		ug/L		100	69 - 120
Bromoform	50.0	46.6		ug/L		93	56 - 132
Bromomethane	50.0	47.5		ug/L		95	40 - 152
Carbon tetrachloride	50.0	50.9		ug/L		102	59 - 133
Chlorobenzene	50.0	48.5		ug/L		97	70 - 120
Chloroethane	50.0	49.2		ug/L		98	48 - 136
Chloroform	50.0	48.9		ug/L		98	70 - 120
Chloromethane	50.0	43.2		ug/L		86	56 - 152
2-Chlorotoluene	50.0	48.7		ug/L		97	70 - 125
4-Chlorotoluene	50.0	48.5		ug/L		97	68 - 124
cis-1,2-Dichloroethene	50.0	48.4		ug/L		97	70 - 125
cis-1,3-Dichloropropene	50.0	49.2		ug/L		98	64 - 127
Dibromochloromethane	50.0	51.5		ug/L		103	68 - 125
1,2-Dibromo-3-Chloropropane	50.0	48.5		ug/L		97	56 - 123
1,2-Dibromoethane	50.0	49.5		ug/L		99	70 - 125
Dibromomethane	50.0	48.1		ug/L		96	70 - 120
1,2-Dichlorobenzene	50.0	49.0		ug/L		98	70 - 125
1,3-Dichlorobenzene	50.0	49.0		ug/L		98	70 - 125
1,4-Dichlorobenzene	50.0	48.7		ug/L		97	70 - 120
Dichlorodifluoromethane	50.0	43.5		ug/L		87	40 - 159
1,1-Dichloroethane	50.0	48.9		ug/L		98	70 - 125

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-481051/5**  
**Matrix: Water**  
**Analysis Batch: 481051**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	50.0	50.8		ug/L		102	68 - 127
1,1-Dichloroethene	50.0	48.7		ug/L		97	67 - 122
1,2-Dichloropropane	50.0	49.2		ug/L		98	67 - 130
1,3-Dichloropropane	50.0	48.9		ug/L		98	62 - 136
2,2-Dichloropropane	50.0	48.5		ug/L		97	58 - 139
1,1-Dichloropropene	50.0	50.2		ug/L		100	70 - 121
Ethylbenzene	50.0	48.3		ug/L		97	70 - 123
Hexachlorobutadiene	50.0	49.4		ug/L		99	51 - 150
Isopropylbenzene	50.0	48.8		ug/L		98	70 - 126
Methylene Chloride	50.0	49.1		ug/L		98	69 - 125
Methyl tert-butyl ether	50.0	51.2		ug/L		102	55 - 123
Naphthalene	50.0	54.6		ug/L		109	53 - 144
n-Butylbenzene	50.0	52.1		ug/L		104	68 - 125
N-Propylbenzene	50.0	49.7		ug/L		99	69 - 127
p-Isopropyltoluene	50.0	50.1		ug/L		100	70 - 125
sec-Butylbenzene	50.0	49.7		ug/L		99	70 - 123
Styrene	50.0	50.4		ug/L		101	70 - 120
tert-Butylbenzene	50.0	49.0		ug/L		98	70 - 121
1,1,1,2-Tetrachloroethane	50.0	49.3		ug/L		99	70 - 125
1,1,2,2-Tetrachloroethane	50.0	46.4		ug/L		93	62 - 140
Tetrachloroethene	50.0	49.3		ug/L		99	70 - 128
Toluene	50.0	44.4		ug/L		89	70 - 125
trans-1,2-Dichloroethene	50.0	48.5		ug/L		97	70 - 125
trans-1,3-Dichloropropene	50.0	50.0		ug/L		100	62 - 128
1,2,3-Trichlorobenzene	50.0	52.8		ug/L		106	51 - 145
1,2,4-Trichlorobenzene	50.0	51.8		ug/L		104	57 - 137
1,1,1-Trichloroethane	50.0	51.3		ug/L		103	70 - 125
1,1,2-Trichloroethane	50.0	48.4		ug/L		97	71 - 130
Trichloroethene	50.0	48.3		ug/L		97	70 - 125
Trichlorofluoromethane	50.0	48.2		ug/L		96	55 - 128
1,2,3-Trichloropropane	50.0	46.6		ug/L		93	50 - 133
1,2,4-Trimethylbenzene	50.0	49.5		ug/L		99	70 - 123
1,3,5-Trimethylbenzene	50.0	49.1		ug/L		98	70 - 123
Vinyl chloride	50.0	45.6		ug/L		91	64 - 126
Xylenes, Total	100	97.6		ug/L		98	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		72 - 124
Dibromofluoromethane	102		75 - 120
1,2-Dichloroethane-d4 (Surr)	105		75 - 126
Toluene-d8 (Surr)	100		75 - 120

**Lab Sample ID: 500-161349-8 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 481051**

**Client Sample ID: MW-21**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.15		50.0	46.6		ug/L		93	70 - 120

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-161349-8 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 481051**

**Client Sample ID: MW-21**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Bromobenzene	<0.36		50.0	47.5		ug/L		95	70 - 122
Bromochloromethane	<0.43		50.0	48.2		ug/L		96	65 - 122
Bromodichloromethane	<0.37		50.0	48.4		ug/L		97	69 - 120
Bromoform	<0.48		50.0	40.7		ug/L		81	56 - 132
Bromomethane	<0.80		50.0	50.5		ug/L		101	40 - 152
Carbon tetrachloride	<0.38		50.0	48.4		ug/L		97	59 - 133
Chlorobenzene	<0.39		50.0	45.8		ug/L		92	70 - 120
Chloroethane	<0.51		50.0	48.4		ug/L		97	48 - 136
Chloroform	<0.37		50.0	47.6		ug/L		95	70 - 120
Chloromethane	<0.32		50.0	43.1		ug/L		86	56 - 152
2-Chlorotoluene	<0.31		50.0	47.7		ug/L		95	70 - 125
4-Chlorotoluene	<0.35		50.0	46.9		ug/L		94	68 - 124
cis-1,2-Dichloroethene	<0.41		50.0	47.6		ug/L		95	70 - 125
cis-1,3-Dichloropropene	<0.42		50.0	45.6		ug/L		91	64 - 127
Dibromochloromethane	<0.49		50.0	48.3		ug/L		97	68 - 125
1,2-Dibromo-3-Chloropropane	<2.0		50.0	44.1		ug/L		88	56 - 123
1,2-Dibromoethane	<0.39		50.0	47.2		ug/L		94	70 - 125
Dibromomethane	<0.27		50.0	47.4		ug/L		95	70 - 120
1,2-Dichlorobenzene	<0.33		50.0	47.2		ug/L		94	70 - 125
1,3-Dichlorobenzene	<0.40		50.0	47.8		ug/L		96	70 - 125
1,4-Dichlorobenzene	<0.36		50.0	46.8		ug/L		94	70 - 120
Dichlorodifluoromethane	<0.67		50.0	41.2		ug/L		82	40 - 159
1,1-Dichloroethane	<0.41		50.0	47.5		ug/L		95	70 - 125
1,2-Dichloroethane	<0.39		50.0	48.3		ug/L		97	68 - 127
1,1-Dichloroethene	<0.39		50.0	45.9		ug/L		92	67 - 122
1,2-Dichloropropane	<0.43		50.0	48.3		ug/L		97	67 - 130
1,3-Dichloropropane	<0.36		50.0	47.7		ug/L		95	62 - 136
2,2-Dichloropropane	<0.44		50.0	45.8		ug/L		92	58 - 139
1,1-Dichloropropene	<0.30		50.0	46.6		ug/L		93	70 - 121
Ethylbenzene	<0.18		50.0	45.7		ug/L		91	70 - 123
Hexachlorobutadiene	<0.45		50.0	47.9		ug/L		96	51 - 150
Isopropylbenzene	<0.39		50.0	48.0		ug/L		96	70 - 126
Methylene Chloride	2.9	J	50.0	48.3		ug/L		91	69 - 125
Methyl tert-butyl ether	<0.39		50.0	48.2		ug/L		96	55 - 123
Naphthalene	<0.34		50.0	51.1		ug/L		102	53 - 144
n-Butylbenzene	<0.39		50.0	49.0		ug/L		98	68 - 125
N-Propylbenzene	<0.41		50.0	48.9		ug/L		98	69 - 127
p-Isopropyltoluene	<0.36		50.0	49.0		ug/L		98	70 - 125
sec-Butylbenzene	<0.40		50.0	48.5		ug/L		97	70 - 123
Styrene	<0.39		50.0	47.5		ug/L		95	70 - 120
tert-Butylbenzene	<0.40		50.0	48.0		ug/L		96	70 - 121
1,1,1,2-Tetrachloroethane	<0.46		50.0	45.5		ug/L		91	70 - 125
1,1,2,2-Tetrachloroethane	<0.40		50.0	44.6		ug/L		89	62 - 140
Tetrachloroethene	7.5		50.0	54.2		ug/L		93	70 - 128
Toluene	<0.15		50.0	41.6		ug/L		83	70 - 125
trans-1,2-Dichloroethene	<0.35		50.0	46.2		ug/L		92	70 - 125
trans-1,3-Dichloropropene	<0.36		50.0	46.1		ug/L		92	62 - 128
1,2,3-Trichlorobenzene	<0.46		50.0	48.6		ug/L		97	51 - 145
1,2,4-Trichlorobenzene	<0.34		50.0	47.5		ug/L		95	57 - 137

Eurofins TestAmerica, Chicago



# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-161349-8 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 481051**

**Client Sample ID: MW-21**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
1,1,1-Trichloroethane	<0.38		50.0	47.7		ug/L		95	70 - 125	
1,1,2-Trichloroethane	<0.35		50.0	45.7		ug/L		91	71 - 130	
Trichloroethene	0.19	J	50.0	46.0		ug/L		92	70 - 125	
Trichlorofluoromethane	<0.43		50.0	49.6		ug/L		99	55 - 128	
1,2,3-Trichloropropane	<0.41		50.0	45.8		ug/L		92	50 - 133	
1,2,4-Trimethylbenzene	<0.36		50.0	48.8		ug/L		98	70 - 123	
1,3,5-Trimethylbenzene	<0.25		50.0	47.5		ug/L		95	70 - 123	
Vinyl chloride	<0.20		50.0	45.9		ug/L		92	64 - 126	
Xylenes, Total	<0.22		100	91.7		ug/L		92	70 - 125	
<b>MS MS</b>										
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	107		72 - 124							
Dibromofluoromethane	102		75 - 120							
1,2-Dichloroethane-d4 (Surr)	104		75 - 126							
Toluene-d8 (Surr)	98		75 - 120							

**Lab Sample ID: 500-161349-8 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 481051**

**Client Sample ID: MW-21**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier							
Benzene	<0.15		50.0	47.4		ug/L		95	70 - 120	2	20	
Bromobenzene	<0.36		50.0	48.2		ug/L		96	70 - 122	1	20	
Bromochloromethane	<0.43		50.0	50.7		ug/L		101	65 - 122	5	20	
Bromodichloromethane	<0.37		50.0	49.6		ug/L		99	69 - 120	2	20	
Bromoform	<0.48		50.0	43.4		ug/L		87	56 - 132	6	20	
Bromomethane	<0.80		50.0	47.3		ug/L		95	40 - 152	7	20	
Carbon tetrachloride	<0.38		50.0	49.9		ug/L		100	59 - 133	3	20	
Chlorobenzene	<0.39		50.0	46.4		ug/L		93	70 - 120	1	20	
Chloroethane	<0.51		50.0	46.4		ug/L		93	48 - 136	4	20	
Chloroform	<0.37		50.0	47.5		ug/L		95	70 - 120	0	20	
Chloromethane	<0.32		50.0	41.2		ug/L		82	56 - 152	5	20	
2-Chlorotoluene	<0.31		50.0	47.7		ug/L		95	70 - 125	0	20	
4-Chlorotoluene	<0.35		50.0	47.0		ug/L		94	68 - 124	0	20	
cis-1,2-Dichloroethene	<0.41		50.0	48.5		ug/L		97	70 - 125	2	20	
cis-1,3-Dichloropropene	<0.42		50.0	45.5		ug/L		91	64 - 127	0	20	
Dibromochloromethane	<0.49		50.0	49.4		ug/L		99	68 - 125	2	20	
1,2-Dibromo-3-Chloropropane	<2.0		50.0	44.6		ug/L		89	56 - 123	1	20	
1,2-Dibromoethane	<0.39		50.0	47.1		ug/L		94	70 - 125	0	20	
Dibromomethane	<0.27		50.0	47.9		ug/L		96	70 - 120	1	20	
1,2-Dichlorobenzene	<0.33		50.0	48.6		ug/L		97	70 - 125	3	20	
1,3-Dichlorobenzene	<0.40		50.0	48.4		ug/L		97	70 - 125	1	20	
1,4-Dichlorobenzene	<0.36		50.0	46.9		ug/L		94	70 - 120	0	20	
Dichlorodifluoromethane	<0.67		50.0	42.0		ug/L		84	40 - 159	2	20	
1,1-Dichloroethane	<0.41		50.0	47.7		ug/L		95	70 - 125	1	20	
1,2-Dichloroethane	<0.39		50.0	49.5		ug/L		99	68 - 127	2	20	
1,1-Dichloroethene	<0.39		50.0	46.8		ug/L		94	67 - 122	2	20	
1,2-Dichloropropane	<0.43		50.0	48.6		ug/L		97	67 - 130	1	20	

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-161349-8 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 481051**

**Client Sample ID: MW-21**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3-Dichloropropane	<0.36		50.0	47.9		ug/L		96	62 - 136	0	20
2,2-Dichloropropane	<0.44		50.0	48.2		ug/L		96	58 - 139	5	20
1,1-Dichloropropene	<0.30		50.0	47.6		ug/L		95	70 - 121	2	20
Ethylbenzene	<0.18		50.0	46.4		ug/L		93	70 - 123	1	20
Hexachlorobutadiene	<0.45		50.0	50.0		ug/L		100	51 - 150	4	20
Isopropylbenzene	<0.39		50.0	47.6		ug/L		95	70 - 126	1	20
Methylene Chloride	2.9	J	50.0	49.9		ug/L		94	69 - 125	3	20
Methyl tert-butyl ether	<0.39		50.0	52.4		ug/L		105	55 - 123	8	20
Naphthalene	<0.34		50.0	53.6		ug/L		107	53 - 144	5	20
n-Butylbenzene	<0.39		50.0	49.5		ug/L		99	68 - 125	1	20
N-Propylbenzene	<0.41		50.0	48.4		ug/L		97	69 - 127	1	20
p-Isopropyltoluene	<0.36		50.0	49.1		ug/L		98	70 - 125	0	20
sec-Butylbenzene	<0.40		50.0	49.4		ug/L		99	70 - 123	2	20
Styrene	<0.39		50.0	48.2		ug/L		96	70 - 120	1	20
tert-Butylbenzene	<0.40		50.0	49.1		ug/L		98	70 - 121	2	20
1,1,1,2-Tetrachloroethane	<0.46		50.0	46.3		ug/L		93	70 - 125	2	20
1,1,2,2-Tetrachloroethane	<0.40		50.0	46.5		ug/L		93	62 - 140	4	20
Tetrachloroethene	7.5		50.0	53.0		ug/L		91	70 - 128	2	20
Toluene	<0.15		50.0	41.5		ug/L		83	70 - 125	0	20
trans-1,2-Dichloroethene	<0.35		50.0	46.8		ug/L		94	70 - 125	1	20
trans-1,3-Dichloropropene	<0.36		50.0	46.0		ug/L		92	62 - 128	0	20
1,2,3-Trichlorobenzene	<0.46		50.0	51.7		ug/L		103	51 - 145	6	20
1,2,4-Trichlorobenzene	<0.34		50.0	50.1		ug/L		100	57 - 137	5	20
1,1,1-Trichloroethane	<0.38		50.0	48.3		ug/L		97	70 - 125	1	20
1,1,2-Trichloroethane	<0.35		50.0	47.4		ug/L		95	71 - 130	4	20
Trichloroethene	0.19	J	50.0	46.4		ug/L		93	70 - 125	1	20
Trichlorofluoromethane	<0.43		50.0	48.1		ug/L		96	55 - 128	3	20
1,2,3-Trichloropropane	<0.41		50.0	46.0		ug/L		92	50 - 133	0	20
1,2,4-Trimethylbenzene	<0.36		50.0	49.6		ug/L		99	70 - 123	2	20
1,3,5-Trimethylbenzene	<0.25		50.0	48.2		ug/L		96	70 - 123	1	20
Vinyl chloride	<0.20		50.0	43.5		ug/L		87	64 - 126	5	20
Xylenes, Total	<0.22		100	92.8		ug/L		93	70 - 125	1	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	106		72 - 124
Dibromofluoromethane	104		75 - 120
1,2-Dichloroethane-d4 (Surr)	104		75 - 126
Toluene-d8 (Surr)	96		75 - 120

**Lab Sample ID: MB 500-481182/6**  
**Matrix: Water**  
**Analysis Batch: 481182**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/18/19 22:16	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/18/19 22:16	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/18/19 22:16	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/18/19 22:16	1

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-481182/6**  
**Matrix: Water**  
**Analysis Batch: 481182**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bromoform	<0.48		1.0	0.48	ug/L			04/18/19 22:16	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/18/19 22:16	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/18/19 22:16	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/18/19 22:16	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/18/19 22:16	1
Chloroform	<0.37		2.0	0.37	ug/L			04/18/19 22:16	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/18/19 22:16	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/18/19 22:16	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/18/19 22:16	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/18/19 22:16	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/18/19 22:16	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/18/19 22:16	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/18/19 22:16	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/18/19 22:16	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/18/19 22:16	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/18/19 22:16	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/18/19 22:16	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/18/19 22:16	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/18/19 22:16	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/18/19 22:16	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/18/19 22:16	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/18/19 22:16	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/18/19 22:16	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/18/19 22:16	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/18/19 22:16	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/18/19 22:16	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/18/19 22:16	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/18/19 22:16	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 22:16	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/18/19 22:16	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/18/19 22:16	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/18/19 22:16	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/18/19 22:16	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/18/19 22:16	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/18/19 22:16	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/18/19 22:16	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 22:16	1
Styrene	<0.39		1.0	0.39	ug/L			04/18/19 22:16	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/18/19 22:16	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/18/19 22:16	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/18/19 22:16	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/18/19 22:16	1
Toluene	<0.15		0.50	0.15	ug/L			04/18/19 22:16	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/18/19 22:16	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/18/19 22:16	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/18/19 22:16	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/18/19 22:16	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/18/19 22:16	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/18/19 22:16	1

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-481182/6**  
**Matrix: Water**  
**Analysis Batch: 481182**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Trichloroethene	<0.16		0.50	0.16	ug/L			04/18/19 22:16	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/18/19 22:16	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/18/19 22:16	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/18/19 22:16	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/18/19 22:16	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/18/19 22:16	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/18/19 22:16	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	112		72 - 124		04/18/19 22:16	1
Dibromofluoromethane	95		75 - 120		04/18/19 22:16	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 126		04/18/19 22:16	1
Toluene-d8 (Surr)	93		75 - 120		04/18/19 22:16	1

**Lab Sample ID: LCS 500-481182/4**  
**Matrix: Water**  
**Analysis Batch: 481182**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzene	50.0	43.7		ug/L		87	70 - 120
Bromobenzene	50.0	45.3		ug/L		91	70 - 122
Bromochloromethane	50.0	46.1		ug/L		92	65 - 122
Bromodichloromethane	50.0	41.6		ug/L		83	69 - 120
Bromoform	50.0	38.8		ug/L		78	56 - 132
Bromomethane	50.0	32.5		ug/L		65	40 - 152
Carbon tetrachloride	50.0	39.6		ug/L		79	59 - 133
Chlorobenzene	50.0	46.3		ug/L		93	70 - 120
Chloroethane	50.0	43.7		ug/L		87	48 - 136
Chloroform	50.0	42.2		ug/L		84	70 - 120
Chloromethane	50.0	61.3		ug/L		123	56 - 152
2-Chlorotoluene	50.0	46.2		ug/L		92	70 - 125
4-Chlorotoluene	50.0	46.9		ug/L		94	68 - 124
cis-1,2-Dichloroethene	50.0	44.6		ug/L		89	70 - 125
cis-1,3-Dichloropropene	50.0	44.7		ug/L		89	64 - 127
Dibromochloromethane	50.0	41.4		ug/L		83	68 - 125
1,2-Dibromo-3-Chloropropane	50.0	42.8		ug/L		86	56 - 123
1,2-Dibromoethane	50.0	44.4		ug/L		89	70 - 125
Dibromomethane	50.0	43.8		ug/L		88	70 - 120
1,2-Dichlorobenzene	50.0	45.8		ug/L		92	70 - 125
1,3-Dichlorobenzene	50.0	45.6		ug/L		91	70 - 125
1,4-Dichlorobenzene	50.0	45.6		ug/L		91	70 - 120
Dichlorodifluoromethane	50.0	44.9		ug/L		90	40 - 159
1,1-Dichloroethane	50.0	51.0		ug/L		102	70 - 125
1,2-Dichloroethane	50.0	47.1		ug/L		94	68 - 127
1,1-Dichloroethene	50.0	42.6		ug/L		85	67 - 122
1,2-Dichloropropane	50.0	54.7		ug/L		109	67 - 130
1,3-Dichloropropane	50.0	46.4		ug/L		93	62 - 136
2,2-Dichloropropane	50.0	42.5		ug/L		85	58 - 139

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-481182/4**  
**Matrix: Water**  
**Analysis Batch: 481182**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloropropene	50.0	43.7		ug/L		87	70 - 121
Ethylbenzene	50.0	43.7		ug/L		87	70 - 123
Hexachlorobutadiene	50.0	48.0		ug/L		96	51 - 150
Isopropylbenzene	50.0	45.2		ug/L		90	70 - 126
Methylene Chloride	50.0	44.6		ug/L		89	69 - 125
Methyl tert-butyl ether	50.0	43.4		ug/L		87	55 - 123
Naphthalene	50.0	48.6		ug/L		97	53 - 144
n-Butylbenzene	50.0	45.6		ug/L		91	68 - 125
N-Propylbenzene	50.0	47.1		ug/L		94	69 - 127
p-Isopropyltoluene	50.0	46.2		ug/L		92	70 - 125
sec-Butylbenzene	50.0	45.1		ug/L		90	70 - 123
Styrene	50.0	46.9		ug/L		94	70 - 120
tert-Butylbenzene	50.0	46.1		ug/L		92	70 - 121
1,1,1,2-Tetrachloroethane	50.0	43.5		ug/L		87	70 - 125
1,1,2,2-Tetrachloroethane	50.0	43.7		ug/L		87	62 - 140
Tetrachloroethene	50.0	44.3		ug/L		89	70 - 128
Toluene	50.0	46.2		ug/L		92	70 - 125
trans-1,2-Dichloroethene	50.0	44.8		ug/L		90	70 - 125
trans-1,3-Dichloropropene	50.0	44.1		ug/L		88	62 - 128
1,2,3-Trichlorobenzene	50.0	50.0		ug/L		100	51 - 145
1,2,4-Trichlorobenzene	50.0	46.7		ug/L		93	57 - 137
1,1,1-Trichloroethane	50.0	43.5		ug/L		87	70 - 125
1,1,2-Trichloroethane	50.0	44.9		ug/L		90	71 - 130
Trichloroethene	50.0	43.4		ug/L		87	70 - 125
Trichlorofluoromethane	50.0	40.0		ug/L		80	55 - 128
1,2,3-Trichloropropane	50.0	43.5		ug/L		87	50 - 133
1,2,4-Trimethylbenzene	50.0	45.6		ug/L		91	70 - 123
1,3,5-Trimethylbenzene	50.0	45.7		ug/L		91	70 - 123
Vinyl chloride	50.0	50.5		ug/L		101	64 - 126
Xylenes, Total	100	93.5		ug/L		94	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		72 - 124
Dibromofluoromethane	95		75 - 120
1,2-Dichloroethane-d4 (Surr)	101		75 - 126
Toluene-d8 (Surr)	95		75 - 120

**Lab Sample ID: 500-161349-21 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 481182**

**Client Sample ID: MW-18A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.15		50.0	46.9		ug/L		94	70 - 120
Bromobenzene	<0.36		50.0	50.7		ug/L		101	70 - 122
Bromochloromethane	<0.43		50.0	49.8		ug/L		100	65 - 122
Bromodichloromethane	<0.37		50.0	45.3		ug/L		91	69 - 120
Bromoform	<0.48		50.0	46.0		ug/L		92	56 - 132
Bromomethane	<0.80		50.0	48.4		ug/L		97	40 - 152

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-161349-21 MS**

**Matrix: Ground Water**

**Analysis Batch: 481182**

**Client Sample ID: MW-18A**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Carbon tetrachloride	<0.38		50.0	44.0		ug/L		88	59 - 133
Chlorobenzene	<0.39		50.0	49.2		ug/L		98	70 - 120
Chloroethane	<0.51		50.0	48.6		ug/L		97	48 - 136
Chloroform	<0.37		50.0	45.5		ug/L		91	70 - 120
Chloromethane	<0.32		50.0	61.2		ug/L		122	56 - 152
2-Chlorotoluene	<0.31		50.0	50.6		ug/L		101	70 - 125
4-Chlorotoluene	<0.35		50.0	50.2		ug/L		100	68 - 124
cis-1,2-Dichloroethene	<0.41		50.0	49.8		ug/L		100	70 - 125
cis-1,3-Dichloropropene	<0.42		50.0	46.6		ug/L		93	64 - 127
Dibromochloromethane	<0.49		50.0	46.0		ug/L		92	68 - 125
1,2-Dibromo-3-Chloropropane	<2.0		50.0	45.2		ug/L		90	56 - 123
1,2-Dibromoethane	<0.39		50.0	49.1		ug/L		98	70 - 125
Dibromomethane	<0.27		50.0	49.2		ug/L		98	70 - 120
1,2-Dichlorobenzene	<0.33		50.0	49.4		ug/L		99	70 - 125
1,3-Dichlorobenzene	<0.40		50.0	49.2		ug/L		98	70 - 125
1,4-Dichlorobenzene	<0.36		50.0	49.6		ug/L		99	70 - 120
Dichlorodifluoromethane	<0.67		50.0	46.5		ug/L		93	40 - 159
1,1-Dichloroethane	<0.41		50.0	56.2		ug/L		112	70 - 125
1,2-Dichloroethane	<0.39		50.0	52.2		ug/L		104	68 - 127
1,1-Dichloroethene	<0.39		50.0	47.5		ug/L		95	67 - 122
1,2-Dichloropropane	<0.43		50.0	61.0		ug/L		122	67 - 130
1,3-Dichloropropane	<0.36		50.0	51.0		ug/L		102	62 - 136
2,2-Dichloropropane	<0.44		50.0	46.3		ug/L		93	58 - 139
1,1-Dichloropropene	<0.30		50.0	47.0		ug/L		94	70 - 121
Ethylbenzene	<0.18		50.0	46.1		ug/L		92	70 - 123
Hexachlorobutadiene	<0.45		50.0	49.8		ug/L		100	51 - 150
Isopropylbenzene	<0.39		50.0	50.0		ug/L		100	70 - 126
Methylene Chloride	<1.6		50.0	48.5		ug/L		97	69 - 125
Methyl tert-butyl ether	<0.39		50.0	48.2		ug/L		96	55 - 123
Naphthalene	<0.34		50.0	52.2		ug/L		104	53 - 144
n-Butylbenzene	<0.39		50.0	47.3		ug/L		95	68 - 125
N-Propylbenzene	<0.41		50.0	51.2		ug/L		102	69 - 127
p-Isopropyltoluene	<0.36		50.0	49.3		ug/L		99	70 - 125
sec-Butylbenzene	<0.40		50.0	48.3		ug/L		97	70 - 123
Styrene	<0.39		50.0	49.7		ug/L		99	70 - 120
tert-Butylbenzene	<0.40		50.0	50.0		ug/L		100	70 - 121
1,1,1,2-Tetrachloroethane	<0.46		50.0	46.7		ug/L		93	70 - 125
1,1,2,2-Tetrachloroethane	<0.40		50.0	50.7		ug/L		101	62 - 140
Tetrachloroethene	0.75	J	50.0	48.9		ug/L		96	70 - 128
Toluene	<0.15		50.0	48.9		ug/L		98	70 - 125
trans-1,2-Dichloroethene	<0.35		50.0	48.8		ug/L		98	70 - 125
trans-1,3-Dichloropropene	<0.36		50.0	47.0		ug/L		94	62 - 128
1,2,3-Trichlorobenzene	<0.46		50.0	50.5		ug/L		101	51 - 145
1,2,4-Trichlorobenzene	<0.34		50.0	47.1		ug/L		94	57 - 137
1,1,1-Trichloroethane	<0.38		50.0	46.7		ug/L		93	70 - 125
1,1,2-Trichloroethane	<0.35		50.0	49.2		ug/L		98	71 - 130
Trichloroethene	0.85		50.0	48.0		ug/L		94	70 - 125
Trichlorofluoromethane	<0.43		50.0	41.1		ug/L		82	55 - 128
1,2,3-Trichloropropane	<0.41		50.0	49.2		ug/L		98	50 - 133

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# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-161349-21 MS**

**Matrix: Ground Water**

**Analysis Batch: 481182**

**Client Sample ID: MW-18A**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	<0.36		50.0	48.8		ug/L		98	70 - 123
1,3,5-Trimethylbenzene	<0.25		50.0	49.3		ug/L		99	70 - 123
Vinyl chloride	<0.20		50.0	49.6		ug/L		99	64 - 126
Xylenes, Total	<0.22		100	98.4		ug/L		98	70 - 125

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		72 - 124
Dibromofluoromethane	98		75 - 120
1,2-Dichloroethane-d4 (Surr)	104		75 - 126
Toluene-d8 (Surr)	93		75 - 120

**Lab Sample ID: 500-161349-21 MSD**

**Matrix: Ground Water**

**Analysis Batch: 481182**

**Client Sample ID: MW-18A**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.15		50.0	46.5		ug/L		93	70 - 120	1	20
Bromobenzene	<0.36		50.0	51.0		ug/L		102	70 - 122	1	20
Bromochloromethane	<0.43		50.0	49.3		ug/L		99	65 - 122	1	20
Bromodichloromethane	<0.37		50.0	45.6		ug/L		91	69 - 120	1	20
Bromoform	<0.48		50.0	44.9		ug/L		90	56 - 132	2	20
Bromomethane	<0.80		50.0	51.5		ug/L		103	40 - 152	6	20
Carbon tetrachloride	<0.38		50.0	44.7		ug/L		89	59 - 133	1	20
Chlorobenzene	<0.39		50.0	49.1		ug/L		98	70 - 120	0	20
Chloroethane	<0.51		50.0	51.6		ug/L		103	48 - 136	6	20
Chloroform	<0.37		50.0	45.4		ug/L		91	70 - 120	0	20
Chloromethane	<0.32		50.0	65.1		ug/L		130	56 - 152	6	20
2-Chlorotoluene	<0.31		50.0	50.8		ug/L		102	70 - 125	0	20
4-Chlorotoluene	<0.35		50.0	50.0		ug/L		100	68 - 124	0	20
cis-1,2-Dichloroethene	<0.41		50.0	49.1		ug/L		98	70 - 125	2	20
cis-1,3-Dichloropropene	<0.42		50.0	45.7		ug/L		91	64 - 127	2	20
Dibromochloromethane	<0.49		50.0	44.7		ug/L		89	68 - 125	3	20
1,2-Dibromo-3-Chloropropane	<2.0		50.0	49.3		ug/L		99	56 - 123	9	20
1,2-Dibromoethane	<0.39		50.0	49.4		ug/L		99	70 - 125	0	20
Dibromomethane	<0.27		50.0	48.5		ug/L		97	70 - 120	1	20
1,2-Dichlorobenzene	<0.33		50.0	50.4		ug/L		101	70 - 125	2	20
1,3-Dichlorobenzene	<0.40		50.0	48.5		ug/L		97	70 - 125	1	20
1,4-Dichlorobenzene	<0.36		50.0	49.9		ug/L		100	70 - 120	1	20
Dichlorodifluoromethane	<0.67		50.0	49.8		ug/L		100	40 - 159	7	20
1,1-Dichloroethane	<0.41		50.0	56.2		ug/L		112	70 - 125	0	20
1,2-Dichloroethane	<0.39		50.0	51.0		ug/L		102	68 - 127	2	20
1,1-Dichloroethene	<0.39		50.0	47.3		ug/L		95	67 - 122	0	20
1,2-Dichloropropane	<0.43		50.0	59.7		ug/L		119	67 - 130	2	20
1,3-Dichloropropane	<0.36		50.0	50.0		ug/L		100	62 - 136	2	20
2,2-Dichloropropane	<0.44		50.0	46.1		ug/L		92	58 - 139	1	20
1,1-Dichloropropene	<0.30		50.0	45.8		ug/L		92	70 - 121	3	20
Ethylbenzene	<0.18		50.0	45.9		ug/L		92	70 - 123	0	20
Hexachlorobutadiene	<0.45		50.0	50.2		ug/L		100	51 - 150	1	20

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# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-161349-21 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 481182**

**Client Sample ID: MW-18A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Isopropylbenzene	<0.39		50.0	49.5		ug/L		99	70 - 126	1	20
Methylene Chloride	<1.6		50.0	48.7		ug/L		97	69 - 125	0	20
Methyl tert-butyl ether	<0.39		50.0	48.4		ug/L		97	55 - 123	0	20
Naphthalene	<0.34		50.0	52.6		ug/L		105	53 - 144	1	20
n-Butylbenzene	<0.39		50.0	47.6		ug/L		95	68 - 125	0	20
N-Propylbenzene	<0.41		50.0	50.5		ug/L		101	69 - 127	1	20
p-Isopropyltoluene	<0.36		50.0	49.2		ug/L		98	70 - 125	0	20
sec-Butylbenzene	<0.40		50.0	48.3		ug/L		97	70 - 123	0	20
Styrene	<0.39		50.0	49.0		ug/L		98	70 - 120	2	20
tert-Butylbenzene	<0.40		50.0	50.2		ug/L		100	70 - 121	0	20
1,1,1,2-Tetrachloroethane	<0.46		50.0	44.7		ug/L		89	70 - 125	4	20
1,1,2,2-Tetrachloroethane	<0.40		50.0	49.9		ug/L		100	62 - 140	1	20
Tetrachloroethene	0.75	J	50.0	47.3		ug/L		93	70 - 128	3	20
Toluene	<0.15		50.0	47.8		ug/L		96	70 - 125	2	20
trans-1,2-Dichloroethene	<0.35		50.0	49.3		ug/L		99	70 - 125	1	20
trans-1,3-Dichloropropene	<0.36		50.0	45.9		ug/L		92	62 - 128	2	20
1,2,3-Trichlorobenzene	<0.46		50.0	51.1		ug/L		102	51 - 145	1	20
1,2,4-Trichlorobenzene	<0.34		50.0	47.2		ug/L		94	57 - 137	0	20
1,1,1-Trichloroethane	<0.38		50.0	47.3		ug/L		95	70 - 125	1	20
1,1,2-Trichloroethane	<0.35		50.0	49.0		ug/L		98	71 - 130	0	20
Trichloroethene	0.85		50.0	46.8		ug/L		92	70 - 125	2	20
Trichlorofluoromethane	<0.43		50.0	44.4		ug/L		89	55 - 128	8	20
1,2,3-Trichloropropane	<0.41		50.0	51.2		ug/L		102	50 - 133	4	20
1,2,4-Trimethylbenzene	<0.36		50.0	49.0		ug/L		98	70 - 123	0	20
1,3,5-Trimethylbenzene	<0.25		50.0	49.1		ug/L		98	70 - 123	0	20
Vinyl chloride	<0.20		50.0	52.1		ug/L		104	64 - 126	5	20
Xylenes, Total	<0.22		100	97.6		ug/L		98	70 - 125	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		72 - 124
Dibromofluoromethane	97		75 - 120
1,2-Dichloroethane-d4 (Surr)	104		75 - 126
Toluene-d8 (Surr)	91		75 - 120

**Lab Sample ID: MB 500-481246/6**  
**Matrix: Water**  
**Analysis Batch: 481246**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			04/19/19 09:48	1
Bromobenzene	<0.36		1.0	0.36	ug/L			04/19/19 09:48	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			04/19/19 09:48	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			04/19/19 09:48	1
Bromoform	<0.48		1.0	0.48	ug/L			04/19/19 09:48	1
Bromomethane	<0.80		3.0	0.80	ug/L			04/19/19 09:48	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			04/19/19 09:48	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			04/19/19 09:48	1
Chloroethane	<0.51		1.0	0.51	ug/L			04/19/19 09:48	1

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# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-481246/6**  
**Matrix: Water**  
**Analysis Batch: 481246**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	<0.37		2.0	0.37	ug/L			04/19/19 09:48	1
Chloromethane	<0.32		1.0	0.32	ug/L			04/19/19 09:48	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			04/19/19 09:48	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			04/19/19 09:48	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			04/19/19 09:48	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			04/19/19 09:48	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			04/19/19 09:48	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			04/19/19 09:48	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			04/19/19 09:48	1
Dibromomethane	<0.27		1.0	0.27	ug/L			04/19/19 09:48	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			04/19/19 09:48	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			04/19/19 09:48	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			04/19/19 09:48	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			04/19/19 09:48	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			04/19/19 09:48	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			04/19/19 09:48	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			04/19/19 09:48	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			04/19/19 09:48	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			04/19/19 09:48	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			04/19/19 09:48	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			04/19/19 09:48	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			04/19/19 09:48	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			04/19/19 09:48	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 09:48	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			04/19/19 09:48	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			04/19/19 09:48	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			04/19/19 09:48	1
Naphthalene	<0.34		1.0	0.34	ug/L			04/19/19 09:48	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			04/19/19 09:48	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			04/19/19 09:48	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			04/19/19 09:48	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 09:48	1
Styrene	<0.39		1.0	0.39	ug/L			04/19/19 09:48	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			04/19/19 09:48	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			04/19/19 09:48	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			04/19/19 09:48	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/19/19 09:48	1
Toluene	<0.15		0.50	0.15	ug/L			04/19/19 09:48	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			04/19/19 09:48	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			04/19/19 09:48	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			04/19/19 09:48	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			04/19/19 09:48	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/19/19 09:48	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			04/19/19 09:48	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/19/19 09:48	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			04/19/19 09:48	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			04/19/19 09:48	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			04/19/19 09:48	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			04/19/19 09:48	1

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# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-481246/6**  
**Matrix: Water**  
**Analysis Batch: 481246**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Vinyl chloride	<0.20		1.0	0.20	ug/L			04/19/19 09:48	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			04/19/19 09:48	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	112		72 - 124		04/19/19 09:48	1
Dibromofluoromethane	90		75 - 120		04/19/19 09:48	1
1,2-Dichloroethane-d4 (Surr)	113		75 - 126		04/19/19 09:48	1
Toluene-d8 (Surr)	90		75 - 120		04/19/19 09:48	1

**Lab Sample ID: LCS 500-481246/4**  
**Matrix: Water**  
**Analysis Batch: 481246**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Benzene	50.0	47.3		ug/L		95	70 - 120
Bromobenzene	50.0	52.1		ug/L		104	70 - 122
Bromochloromethane	50.0	47.7		ug/L		95	65 - 122
Bromodichloromethane	50.0	45.4		ug/L		91	69 - 120
Bromoform	50.0	42.8		ug/L		86	56 - 132
Bromomethane	50.0	18.4 *		ug/L		37	40 - 152
Carbon tetrachloride	50.0	48.1		ug/L		96	59 - 133
Chlorobenzene	50.0	46.3		ug/L		93	70 - 120
Chloroethane	50.0	38.0		ug/L		76	48 - 136
Chloroform	50.0	46.7		ug/L		93	70 - 120
Chloromethane	50.0	68.3		ug/L		137	56 - 152
2-Chlorotoluene	50.0	51.5		ug/L		103	70 - 125
4-Chlorotoluene	50.0	49.0		ug/L		98	68 - 124
cis-1,2-Dichloroethene	50.0	47.3		ug/L		95	70 - 125
cis-1,3-Dichloropropene	50.0	51.1		ug/L		102	64 - 127
Dibromochloromethane	50.0	46.8		ug/L		94	68 - 125
1,2-Dibromo-3-Chloropropane	50.0	50.1		ug/L		100	56 - 123
1,2-Dibromoethane	50.0	49.5		ug/L		99	70 - 125
Dibromomethane	50.0	42.6		ug/L		85	70 - 120
1,2-Dichlorobenzene	50.0	49.2		ug/L		98	70 - 125
1,3-Dichlorobenzene	50.0	50.8		ug/L		102	70 - 125
1,4-Dichlorobenzene	50.0	48.8		ug/L		98	70 - 120
Dichlorodifluoromethane	50.0	60.7		ug/L		121	40 - 159
1,1-Dichloroethane	50.0	53.3		ug/L		107	70 - 125
1,2-Dichloroethane	50.0	54.1		ug/L		108	68 - 127
1,1-Dichloroethene	50.0	47.6		ug/L		95	67 - 122
1,2-Dichloropropane	50.0	53.5		ug/L		107	67 - 130
1,3-Dichloropropane	50.0	50.7		ug/L		101	62 - 136
2,2-Dichloropropane	50.0	43.1		ug/L		86	58 - 139
1,1-Dichloropropene	50.0	49.9		ug/L		100	70 - 121
Ethylbenzene	50.0	46.2		ug/L		92	70 - 123
Hexachlorobutadiene	50.0	53.3		ug/L		107	51 - 150
Isopropylbenzene	50.0	51.5		ug/L		103	70 - 126
Methylene Chloride	50.0	46.5		ug/L		93	69 - 125

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-481246/4**  
**Matrix: Water**  
**Analysis Batch: 481246**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	50.0	44.7		ug/L		89	55 - 123
Naphthalene	50.0	38.3		ug/L		77	53 - 144
n-Butylbenzene	50.0	46.6		ug/L		93	68 - 125
N-Propylbenzene	50.0	50.0		ug/L		100	69 - 127
p-Isopropyltoluene	50.0	48.4		ug/L		97	70 - 125
sec-Butylbenzene	50.0	48.7		ug/L		97	70 - 123
Styrene	50.0	42.7		ug/L		85	70 - 120
tert-Butylbenzene	50.0	49.5		ug/L		99	70 - 121
1,1,1,2-Tetrachloroethane	50.0	46.8		ug/L		94	70 - 125
1,1,1,2,2-Tetrachloroethane	50.0	50.6		ug/L		101	62 - 140
Tetrachloroethene	50.0	49.3		ug/L		99	70 - 128
Toluene	50.0	45.6		ug/L		91	70 - 125
trans-1,2-Dichloroethene	50.0	48.4		ug/L		97	70 - 125
trans-1,3-Dichloropropene	50.0	50.8		ug/L		102	62 - 128
1,2,3-Trichlorobenzene	50.0	36.0		ug/L		72	51 - 145
1,2,4-Trichlorobenzene	50.0	46.3		ug/L		93	57 - 137
1,1,1-Trichloroethane	50.0	48.0		ug/L		96	70 - 125
1,1,2-Trichloroethane	50.0	48.1		ug/L		96	71 - 130
Trichloroethene	50.0	49.8		ug/L		100	70 - 125
Trichlorofluoromethane	50.0	54.6		ug/L		109	55 - 128
1,2,3-Trichloropropane	50.0	55.5		ug/L		111	50 - 133
1,2,4-Trimethylbenzene	50.0	47.7		ug/L		95	70 - 123
1,3,5-Trimethylbenzene	50.0	48.6		ug/L		97	70 - 123
Vinyl chloride	50.0	45.9		ug/L		92	64 - 126
Xylenes, Total	100	85.7		ug/L		86	70 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	113		72 - 124
Dibromofluoromethane	91		75 - 120
1,2-Dichloroethane-d4 (Surr)	107		75 - 126
Toluene-d8 (Surr)	90		75 - 120

# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: EXW-4**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-1**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481051	04/18/19 15:24	PMF	TAL CHI

**Client Sample ID: EXW-6**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-2**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481051	04/18/19 15:52	PMF	TAL CHI

**Client Sample ID: Muni #3**

**Date Collected: 04/09/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-3**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481051	04/18/19 16:18	PMF	TAL CHI

**Client Sample ID: MW-17**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-4**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481051	04/18/19 16:45	PMF	TAL CHI

**Client Sample ID: MW-18**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-5**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481051	04/18/19 17:12	PMF	TAL CHI

**Client Sample ID: MW-19**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-6**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481051	04/18/19 17:39	PMF	TAL CHI

**Client Sample ID: MW-20**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-7**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481051	04/18/19 18:06	PMF	TAL CHI

# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-21**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-8**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481051	04/18/19 18:33	PMF	TAL CHI

**Client Sample ID: MW-21A**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-9**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 01:39	PMF	TAL CHI

**Client Sample ID: B-1**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-10**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 02:04	PMF	TAL CHI

**Client Sample ID: B-1A**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-11**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 02:29	PMF	TAL CHI

**Client Sample ID: B-1B**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-12**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 02:54	PMF	TAL CHI

**Client Sample ID: B-3**

**Date Collected: 04/09/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-13**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 03:19	PMF	TAL CHI

**Client Sample ID: B-3A**

**Date Collected: 04/09/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-14**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 03:44	PMF	TAL CHI

Eurofins TestAmerica, Chicago

# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: B-10**  
**Date Collected: 04/08/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-15**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 04:10	PMF	TAL CHI

**Client Sample ID: B-11**  
**Date Collected: 04/08/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-16**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 04:35	PMF	TAL CHI

**Client Sample ID: B-12**  
**Date Collected: 04/08/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-17**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 05:01	PMF	TAL CHI

**Client Sample ID: B-13**  
**Date Collected: 04/09/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-18**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 05:26	PMF	TAL CHI

**Client Sample ID: B-13A**  
**Date Collected: 04/09/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-19**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 05:51	PMF	TAL CHI

**Client Sample ID: B-13B**  
**Date Collected: 04/09/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-20**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 06:17	PMF	TAL CHI

**Client Sample ID: MW-18A**  
**Date Collected: 04/08/19 00:00**  
**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-21**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/19/19 06:42	PMF	TAL CHI

# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

**Client Sample ID: MW-19A**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-22**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481246	04/19/19 12:52	JLC	TAL CHI

**Client Sample ID: Discharge Pipe**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-23**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481246	04/19/19 13:18	JLC	TAL CHI

**Client Sample ID: B-1B Dup**

**Date Collected: 04/08/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-24**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481246	04/19/19 13:44	JLC	TAL CHI

**Client Sample ID: Trip Blank**

**Date Collected: 04/09/19 00:00**

**Date Received: 04/10/19 09:20**

**Lab Sample ID: 500-161349-25**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	481182	04/18/19 22:42	PMF	TAL CHI

## Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners - 8267019

Job ID: 500-161349-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19

1

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)	Bill To (optional)
Contact: <u>Dick Jupter</u>	Contact: _____
Company: <u>MSA Professional</u>	Company: _____
Address: <u>1230 South Blvd</u>	Address: <u>Same</u>
Address: <u>Bowling, WI 53913</u>	Address: _____
Phone: <u>608-336-2771</u>	Phone: _____
Fax: _____	Fax: _____
E-Mail: _____	PO#/Reference#: _____

## Chain of Custody Record

Lab Job #: 500-161349

Chain of Custody Number: \_\_\_\_\_

Page 1 of 3

Temperature °C of Cooler: -1.5

Client		Client Project #		Preservative											Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other		
Project Name		Lab Project #		Parameter													
Project Location/State		Lab Project #		Parameter													
Sampler		Lab PM		Parameter											Comments		
Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix											
1		Exw-4	4/8-9/19		3	6w	X										
2		Exw-6			3		X										
3		Muni #3			3		X										
4		mw-17			3		X										
5		mw-18			3		X										
6		mw-19			3		X										
7		mw-20			3		X										
8		mw-21			3		X										
9		mw-21A			3		X										
10		B-1			3		X										



500-161349 COC

Turnaround Time Required (Business Days):  1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Requested Due Date: \_\_\_\_\_

Sample Disposal:  Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>Dick Jupter</u>	Company: <u>MSA</u>	Date: <u>4/9/19</u>	Time: _____	Received By: <u>Anil Sanch</u>	Company: <u>TACHE</u>	Date: <u>04/10/19</u>	Time: <u>0920</u>
Relinquished By: _____	Company: _____	Date: _____	Time: _____	Received By: _____	Company: _____	Date: _____	Time: _____
Relinquished By: _____	Company: _____	Date: _____	Time: _____	Received By: _____	Company: _____	Date: _____	Time: _____

Lab Courier: \_\_\_\_\_

Shipped: EX Priority

Hand Delivered: \_\_\_\_\_

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments: \_\_\_\_\_

Lab Comments: \_\_\_\_\_

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To: Dick Luster (optional)  
 Contact: MSA Professional  
 Company: MSA Professional  
 Address: 1237 South Blvd  
 Address: Bonanza Way 37913  
 Phone: 603-351-2771  
 Fax:  
 E-Mail:

Bill To: (optional)  
 Contact:  
 Company:  
 Address: Same  
 Address:  
 Phone:  
 Fax:  
 PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-161349  
 Chain of Custody Number:  
 Page 2 of 3  
 Temperature °C of Cooler: -1.5

Client		Client Project #		Preservative		Parameter		Preservative Key					
<u>MSA Professional</u>		<u>60267019</u>						1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other					
Project Name		Project Location/State		Lab Project #		Sampler		Lab PM					
<u>Mundana Cleaners</u>		<u>Mundana, WI</u>				<u>David Fitzsimmons</u>							
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix					Comments		
			Date	Time									
11		B-1A	4/8-9/19		3	Gw	X						
12		B-1B	↓		3		X						
13		B-3		3		X							
14		B-3A		3		X							
15		B-12		3		X							
16		B-11		3		X							
17		B-12		3		X							
18		B-13		3		X							
19		B-13A		3		X							
20		B-13B		3		X							

Turnaround Time Required (Business Days)  
 \_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Requested Due Date: \_\_\_\_\_

Sample Disposal:  Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>MSA</u> Date: <u>4/9/19</u> Time: _____	Received By: <u>[Signature]</u> Company: <u>TAHE</u> Date: <u>04/10/19</u> Time: <u>0920</u>	Lab Courier: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Shipped: <u>EX Priority</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

<p>Matrix Key</p> <p>WW - Wastewater SE - Sediment                  W - Water SO - Soil                  S - Soil L - Leachate                  SL - Sludge WI - Wipe                  MS - Miscellaneous DW - Drinking Water                  OL - Oil O - Other                  A - Air</p>	Client Comments:	Lab Comments:
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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
Phone: 708.534.5200 Fax: 708.534.5211

Report To: (optional) Dick Luter  
 Contact: Dick Luter  
 Company: MSA Professional  
 Address: 123D South Blvd  
 Address: Banana Ridge 52913  
 Phone: 608-356-2771  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To: (optional) \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: same  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500161349  
 Chain of Custody Number: \_\_\_\_\_  
 Page 3 of 3  
 Temperature °C of Cooler: -1.5

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
Project Name		Lab Project #		Sampling		# of Containers		Matrix		
Project Location/State		Lab PM		Date	Time					
MSA Professional		8267019								Comments
Minoqua Cleaners										
Minoqua, WI										
DAVID FITZSIMMONS										
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix				
21		mw-18A	4/18/19		3	GW	X			
22		mw-19A			3		X			
23		Discharge Pipe			3		X			
24		B-1B Dump			3		X			
25		Trig Blank			2		X			

Turnaround Time Required (Business Days)  
 1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other \_\_\_\_\_

Requested Due Date: \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>MSA</u> Date: <u>4/9/19</u> Time: _____	Received By: <u>[Signature]</u> Company: <u>TAUSA</u> Date: <u>04/10/19</u> Time: <u>0920</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____

Lab Courier: \_\_\_\_\_  
 Shipped: FX Priority  
 Hand Delivered: \_\_\_\_\_

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments: \_\_\_\_\_

Lab Comments: \_\_\_\_\_

# Login Sample Receipt Checklist

Client: MSA Professional Services, Inc

Job Number: 500-161349-1

**Login Number: 161349**

**List Source: Eurofins TestAmerica, Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	-1.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## ANALYTICAL REPORT

Eurofins TestAmerica, Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

Laboratory Job ID: 500-172579-1  
Client Project/Site: Minocqua Cleaners

For:  
MSA Professional Services, Inc  
1230 South Blvd  
Baraboo, Wisconsin 53913

Attn: Mr. Richard Lyster



Authorized for release by:  
11/13/2019 3:48:32 PM

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



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# Case Narrative

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

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**Job ID: 500-172579-1**

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**Laboratory: Eurofins TestAmerica, Chicago**

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**Narrative**

**Job Narrative  
500-172579-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 10/30/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

**Receipt Exceptions**

We didn't receive the Trip Blank

**GC/MS VOA**

Method 8260B: The method blank for analytical batch 514502 contained Naphthalene above the Method detection limit (MDL) but below reporting limit (RL). Naphthalene was non-detect in the samples: therefore, no re-analysis was done and the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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# Detection Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Client Sample ID: EXW-4

## Lab Sample ID: 500-172579-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.3		1.0	0.41	ug/L	1		8260B	Total/NA
Trichloroethene	0.99		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: EXW-6

## Lab Sample ID: 500-172579-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	16		1.0	0.41	ug/L	1		8260B	Total/NA
Tetrachloroethene	4.7		1.0	0.37	ug/L	1		8260B	Total/NA
Trichloroethene	8.7		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: Muni #3

## Lab Sample ID: 500-172579-3

No Detections.

## Client Sample ID: MW-17

## Lab Sample ID: 500-172579-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	22		1.0	0.41	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.76	J	1.0	0.35	ug/L	1		8260B	Total/NA
Trichloroethene	0.26	J	0.50	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	12		1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-18

## Lab Sample ID: 500-172579-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.81	J	1.0	0.41	ug/L	1		8260B	Total/NA
Tetrachloroethene	1.4		1.0	0.37	ug/L	1		8260B	Total/NA
Trichloroethene	0.69		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-19

## Lab Sample ID: 500-172579-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	53		1.0	0.41	ug/L	1		8260B	Total/NA
Tetrachloroethene	1.1		1.0	0.37	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.43	J	1.0	0.35	ug/L	1		8260B	Total/NA
Trichloroethene	14		0.50	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	19		1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-21

## Lab Sample ID: 500-172579-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2.3		1.0	0.37	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-21A

## Lab Sample ID: 500-172579-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	42		1.0	0.41	ug/L	1		8260B	Total/NA
Trichloroethene	3.1		0.50	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	5.2		1.0	0.20	ug/L	1		8260B	Total/NA

## Client Sample ID: B-1

## Lab Sample ID: 500-172579-9

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago



# Detection Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Client Sample ID: B-1A

Lab Sample ID: 500-172579-10

No Detections.

## Client Sample ID: B-1B

Lab Sample ID: 500-172579-11

No Detections.

## Client Sample ID: B-3

Lab Sample ID: 500-172579-12

No Detections.

## Client Sample ID: B-3A

Lab Sample ID: 500-172579-13

No Detections.

## Client Sample ID: B-10

Lab Sample ID: 500-172579-14

No Detections.

## Client Sample ID: B-11

Lab Sample ID: 500-172579-15

No Detections.

## Client Sample ID: B-12

Lab Sample ID: 500-172579-16

No Detections.

## Client Sample ID: B-13

Lab Sample ID: 500-172579-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	1.6	J	2.0	0.37	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	3.7		1.0	0.41	ug/L	1		8260B	Total/NA
Tetrachloroethene	17		1.0	0.37	ug/L	1		8260B	Total/NA
Trichloroethene	3.8		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: B-13A

Lab Sample ID: 500-172579-18

No Detections.

## Client Sample ID: B-13B

Lab Sample ID: 500-172579-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2.6		1.0	0.37	ug/L	1		8260B	Total/NA
Trichloroethene	0.74		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-18A

Lab Sample ID: 500-172579-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.80		0.50	0.16	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-19A

Lab Sample ID: 500-172579-21

No Detections.

## Client Sample ID: Discharge

Lab Sample ID: 500-172579-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.75		0.50	0.16	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

# Detection Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-19 DUP**

**Lab Sample ID: 500-172579-23**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	57		1.0	0.41	ug/L	1		8260B	Total/NA
Tetrachloroethene	1.3		1.0	0.37	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.67	J	1.0	0.35	ug/L	1		8260B	Total/NA
Trichloroethene	15		0.50	0.16	ug/L	1		8260B	Total/NA
Vinyl chloride	20		1.0	0.20	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

# Method Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
5030B	Purge and Trap	SW846	TAL CHI

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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# Sample Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-172579-1	EXW-4	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-2	EXW-6	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-3	Muni #3	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-4	MW-17	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-5	MW-18	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-6	MW-19	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-7	MW-21	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-8	MW-21A	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-9	B-1	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-10	B-1A	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-11	B-1B	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-12	B-3	Ground Water	10/29/19 00:00	10/30/19 09:30	
500-172579-13	B-3A	Ground Water	10/29/19 00:00	10/30/19 09:30	
500-172579-14	B-10	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-15	B-11	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-16	B-12	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-17	B-13	Ground Water	10/29/19 00:00	10/30/19 09:30	
500-172579-18	B-13A	Ground Water	10/29/19 00:00	10/30/19 09:30	
500-172579-19	B-13B	Ground Water	10/29/19 00:00	10/30/19 09:30	
500-172579-20	MW-18A	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-21	MW-19A	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-22	Discharge	Ground Water	10/28/19 00:00	10/30/19 09:30	
500-172579-23	MW-19 DUP	Ground Water	10/28/19 00:00	10/30/19 09:30	

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: EXW-4**

**Lab Sample ID: 500-172579-1**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 10:20	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 10:20	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 10:20	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 10:20	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 10:20	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 10:20	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 10:20	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 10:20	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 10:20	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 10:20	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 10:20	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 10:20	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 10:20	1
<b>cis-1,2-Dichloroethene</b>	<b>1.3</b>		1.0	0.41	ug/L			11/09/19 10:20	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 10:20	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 10:20	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 10:20	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 10:20	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 10:20	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 10:20	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 10:20	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 10:20	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 10:20	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 10:20	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 10:20	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 10:20	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 10:20	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 10:20	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 10:20	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 10:20	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 10:20	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 10:20	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 10:20	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 10:20	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 10:20	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 10:20	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 10:20	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 10:20	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 10:20	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 10:20	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 10:20	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 10:20	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 10:20	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 10:20	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 10:20	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 10:20	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 10:20	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 10:20	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 10:20	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: EXW-4**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-1**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 10:20	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 10:20	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 10:20	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 10:20	1
<b>Trichloroethene</b>	<b>0.99</b>		0.50	0.16	ug/L			11/09/19 10:20	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 10:20	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 10:20	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 10:20	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 10:20	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 10:20	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 10:20	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	101		72 - 124					11/09/19 10:20	1
Dibromofluoromethane	95		75 - 120					11/09/19 10:20	1
1,2-Dichloroethane-d4 (Surr)	102		75 - 126					11/09/19 10:20	1
Toluene-d8 (Surr)	103		75 - 120					11/09/19 10:20	1

**Client Sample ID: EXW-6**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-2**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 10:46	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 10:46	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 10:46	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 10:46	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 10:46	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 10:46	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 10:46	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 10:46	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 10:46	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 10:46	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 10:46	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 10:46	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 10:46	1
<b>cis-1,2-Dichloroethene</b>	<b>16</b>		1.0	0.41	ug/L			11/09/19 10:46	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 10:46	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 10:46	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 10:46	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 10:46	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 10:46	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 10:46	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 10:46	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 10:46	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 10:46	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 10:46	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 10:46	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 10:46	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: EXW-6**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-2**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 10:46	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 10:46	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 10:46	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 10:46	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 10:46	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 10:46	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 10:46	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 10:46	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 10:46	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 10:46	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 10:46	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 10:46	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 10:46	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 10:46	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 10:46	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 10:46	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 10:46	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 10:46	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 10:46	1
<b>Tetrachloroethene</b>	<b>4.7</b>		1.0	0.37	ug/L			11/09/19 10:46	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 10:46	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 10:46	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 10:46	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 10:46	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 10:46	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 10:46	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 10:46	1
<b>Trichloroethene</b>	<b>8.7</b>		0.50	0.16	ug/L			11/09/19 10:46	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 10:46	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 10:46	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 10:46	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 10:46	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 10:46	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 10:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		72 - 124		11/09/19 10:46	1
Dibromofluoromethane	99		75 - 120		11/09/19 10:46	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 126		11/09/19 10:46	1
Toluene-d8 (Surr)	101		75 - 120		11/09/19 10:46	1

**Client Sample ID: Muni #3**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-3**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 11:12	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 11:12	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 11:12	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: Muni #3**

**Lab Sample ID: 500-172579-3**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 11:12	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 11:12	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 11:12	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 11:12	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 11:12	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 11:12	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 11:12	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 11:12	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 11:12	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 11:12	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 11:12	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 11:12	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 11:12	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 11:12	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 11:12	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 11:12	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 11:12	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 11:12	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 11:12	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 11:12	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 11:12	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 11:12	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 11:12	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 11:12	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 11:12	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 11:12	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 11:12	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 11:12	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 11:12	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 11:12	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 11:12	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 11:12	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 11:12	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 11:12	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 11:12	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 11:12	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 11:12	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 11:12	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 11:12	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 11:12	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 11:12	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 11:12	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 11:12	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 11:12	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 11:12	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 11:12	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 11:12	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 11:12	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 11:12	1



# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: Muni #3**

**Lab Sample ID: 500-172579-3**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 11:12	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 11:12	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 11:12	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 11:12	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 11:12	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 11:12	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 11:12	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 11:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		72 - 124		11/09/19 11:12	1
Dibromofluoromethane	97		75 - 120		11/09/19 11:12	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		11/09/19 11:12	1
Toluene-d8 (Surr)	102		75 - 120		11/09/19 11:12	1

**Client Sample ID: MW-17**

**Lab Sample ID: 500-172579-4**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 11:38	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 11:38	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 11:38	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 11:38	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 11:38	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 11:38	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 11:38	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 11:38	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 11:38	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 11:38	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 11:38	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 11:38	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 11:38	1
<b>cis-1,2-Dichloroethene</b>	<b>22</b>		1.0	0.41	ug/L			11/09/19 11:38	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 11:38	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 11:38	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 11:38	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 11:38	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 11:38	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 11:38	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 11:38	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 11:38	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 11:38	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 11:38	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 11:38	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 11:38	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 11:38	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 11:38	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 11:38	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-17**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-4**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 11:38	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 11:38	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 11:38	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 11:38	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 11:38	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 11:38	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 11:38	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 11:38	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 11:38	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 11:38	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 11:38	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 11:38	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 11:38	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 11:38	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 11:38	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 11:38	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 11:38	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 11:38	1
<b>trans-1,2-Dichloroethene</b>	<b>0.76</b>	<b>J</b>	1.0	0.35	ug/L			11/09/19 11:38	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 11:38	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 11:38	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 11:38	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 11:38	1
1,1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 11:38	1
<b>Trichloroethene</b>	<b>0.26</b>	<b>J</b>	0.50	0.16	ug/L			11/09/19 11:38	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 11:38	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 11:38	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 11:38	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 11:38	1
<b>Vinyl chloride</b>	<b>12</b>		1.0	0.20	ug/L			11/09/19 11:38	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 11:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		72 - 124		11/09/19 11:38	1
Dibromofluoromethane	96		75 - 120		11/09/19 11:38	1
1,2-Dichloroethane-d4 (Surr)	100		75 - 126		11/09/19 11:38	1
Toluene-d8 (Surr)	102		75 - 120		11/09/19 11:38	1

**Client Sample ID: MW-18**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-5**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 12:04	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 12:04	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 12:04	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 12:04	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 12:04	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 12:04	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-18**

**Lab Sample ID: 500-172579-5**

Date Collected: 10/28/19 00:00

Matrix: Ground Water

Date Received: 10/30/19 09:30

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 12:04	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 12:04	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 12:04	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 12:04	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 12:04	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 12:04	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 12:04	1
<b>cis-1,2-Dichloroethene</b>	<b>0.81</b>	<b>J</b>	1.0	0.41	ug/L			11/09/19 12:04	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 12:04	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 12:04	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 12:04	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 12:04	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 12:04	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 12:04	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 12:04	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 12:04	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 12:04	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 12:04	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 12:04	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 12:04	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 12:04	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 12:04	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 12:04	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 12:04	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 12:04	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 12:04	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 12:04	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 12:04	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 12:04	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 12:04	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 12:04	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 12:04	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 12:04	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 12:04	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 12:04	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 12:04	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 12:04	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 12:04	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 12:04	1
<b>Tetrachloroethene</b>	<b>1.4</b>		1.0	0.37	ug/L			11/09/19 12:04	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 12:04	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 12:04	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 12:04	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 12:04	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 12:04	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 12:04	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 12:04	1
<b>Trichloroethene</b>	<b>0.69</b>		0.50	0.16	ug/L			11/09/19 12:04	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 12:04	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-18**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-5**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 12:04	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 12:04	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 12:04	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 12:04	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 12:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		72 - 124		11/09/19 12:04	1
Dibromofluoromethane	95		75 - 120		11/09/19 12:04	1
1,2-Dichloroethane-d4 (Surr)	103		75 - 126		11/09/19 12:04	1
Toluene-d8 (Surr)	102		75 - 120		11/09/19 12:04	1

**Client Sample ID: MW-19**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-6**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 12:30	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 12:30	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 12:30	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 12:30	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 12:30	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 12:30	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 12:30	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 12:30	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 12:30	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 12:30	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 12:30	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 12:30	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 12:30	1
<b>cis-1,2-Dichloroethene</b>	<b>53</b>		1.0	0.41	ug/L			11/09/19 12:30	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 12:30	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 12:30	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 12:30	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 12:30	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 12:30	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 12:30	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 12:30	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 12:30	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 12:30	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 12:30	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 12:30	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 12:30	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 12:30	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 12:30	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 12:30	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 12:30	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 12:30	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 12:30	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-19**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-6**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 12:30	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 12:30	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 12:30	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 12:30	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 12:30	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 12:30	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 12:30	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 12:30	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 12:30	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 12:30	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 12:30	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 12:30	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 12:30	1
<b>Tetrachloroethene</b>	<b>1.1</b>		1.0	0.37	ug/L			11/09/19 12:30	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 12:30	1
<b>trans-1,2-Dichloroethene</b>	<b>0.43 J</b>		1.0	0.35	ug/L			11/09/19 12:30	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 12:30	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 12:30	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 12:30	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 12:30	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 12:30	1
<b>Trichloroethene</b>	<b>14</b>		0.50	0.16	ug/L			11/09/19 12:30	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 12:30	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 12:30	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 12:30	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 12:30	1
<b>Vinyl chloride</b>	<b>19</b>		1.0	0.20	ug/L			11/09/19 12:30	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 12:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		72 - 124		11/09/19 12:30	1
Dibromofluoromethane	98		75 - 120		11/09/19 12:30	1
1,2-Dichloroethane-d4 (Surr)	101		75 - 126		11/09/19 12:30	1
Toluene-d8 (Surr)	103		75 - 120		11/09/19 12:30	1

**Client Sample ID: MW-21**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-7**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 12:56	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 12:56	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 12:56	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 12:56	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 12:56	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 12:56	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 12:56	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 12:56	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 12:56	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-21**

**Lab Sample ID: 500-172579-7**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 12:56	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 12:56	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 12:56	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 12:56	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 12:56	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 12:56	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 12:56	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 12:56	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 12:56	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 12:56	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 12:56	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 12:56	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 12:56	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 12:56	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 12:56	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 12:56	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 12:56	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 12:56	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 12:56	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 12:56	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 12:56	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 12:56	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 12:56	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 12:56	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 12:56	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 12:56	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 12:56	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 12:56	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 12:56	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 12:56	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 12:56	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 12:56	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 12:56	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 12:56	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 12:56	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 12:56	1
<b>Tetrachloroethene</b>	<b>2.3</b>		1.0	0.37	ug/L			11/09/19 12:56	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 12:56	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 12:56	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 12:56	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 12:56	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 12:56	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 12:56	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 12:56	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 12:56	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 12:56	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 12:56	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 12:56	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 12:56	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-21**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-7**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 12:56	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 12:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		72 - 124					11/09/19 12:56	1
Dibromofluoromethane	97		75 - 120					11/09/19 12:56	1
1,2-Dichloroethane-d4 (Surr)	102		75 - 126					11/09/19 12:56	1
Toluene-d8 (Surr)	100		75 - 120					11/09/19 12:56	1

**Client Sample ID: MW-21A**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-8**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 13:22	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 13:22	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 13:22	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 13:22	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 13:22	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 13:22	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 13:22	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 13:22	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 13:22	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 13:22	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 13:22	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 13:22	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 13:22	1
<b>cis-1,2-Dichloroethene</b>	<b>42</b>		1.0	0.41	ug/L			11/09/19 13:22	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 13:22	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 13:22	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 13:22	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 13:22	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 13:22	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 13:22	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 13:22	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 13:22	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 13:22	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 13:22	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 13:22	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 13:22	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 13:22	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 13:22	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 13:22	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 13:22	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 13:22	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 13:22	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 13:22	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 13:22	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 13:22	1

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# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-21A**

**Lab Sample ID: 500-172579-8**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 13:22	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 13:22	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 13:22	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 13:22	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 13:22	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 13:22	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 13:22	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 13:22	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 13:22	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 13:22	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 13:22	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 13:22	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 13:22	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 13:22	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 13:22	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 13:22	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 13:22	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 13:22	1
<b>Trichloroethene</b>	<b>3.1</b>		0.50	0.16	ug/L			11/09/19 13:22	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 13:22	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 13:22	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 13:22	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 13:22	1
<b>Vinyl chloride</b>	<b>5.2</b>		1.0	0.20	ug/L			11/09/19 13:22	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 13:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		72 - 124		11/09/19 13:22	1
Dibromofluoromethane	99		75 - 120		11/09/19 13:22	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 126		11/09/19 13:22	1
Toluene-d8 (Surr)	101		75 - 120		11/09/19 13:22	1

**Client Sample ID: B-1**

**Lab Sample ID: 500-172579-9**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 13:48	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 13:48	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 13:48	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 13:48	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 13:48	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 13:48	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 13:48	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 13:48	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 13:48	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 13:48	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 13:48	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 13:48	1

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# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-1**

**Lab Sample ID: 500-172579-9**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 13:48	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 13:48	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 13:48	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 13:48	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 13:48	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 13:48	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 13:48	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 13:48	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 13:48	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 13:48	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 13:48	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 13:48	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 13:48	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 13:48	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 13:48	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 13:48	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 13:48	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 13:48	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 13:48	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 13:48	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 13:48	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 13:48	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 13:48	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 13:48	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 13:48	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 13:48	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 13:48	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 13:48	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 13:48	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 13:48	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 13:48	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 13:48	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 13:48	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 13:48	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 13:48	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 13:48	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 13:48	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 13:48	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 13:48	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 13:48	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 13:48	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 13:48	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 13:48	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 13:48	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 13:48	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 13:48	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 13:48	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 13:48	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-1**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-9**

**Matrix: Ground Water**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		72 - 124		11/09/19 13:48	1
Dibromofluoromethane	98		75 - 120		11/09/19 13:48	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 126		11/09/19 13:48	1
Toluene-d8 (Surr)	99		75 - 120		11/09/19 13:48	1

**Client Sample ID: B-1A**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-10**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 14:14	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 14:14	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 14:14	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 14:14	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 14:14	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 14:14	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 14:14	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 14:14	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 14:14	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 14:14	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 14:14	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 14:14	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 14:14	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 14:14	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 14:14	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 14:14	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 14:14	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 14:14	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 14:14	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 14:14	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 14:14	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 14:14	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 14:14	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 14:14	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 14:14	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 14:14	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 14:14	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 14:14	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 14:14	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 14:14	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 14:14	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 14:14	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 14:14	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 14:14	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 14:14	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 14:14	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 14:14	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 14:14	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 14:14	1

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# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-1A**

**Lab Sample ID: 500-172579-10**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 14:14	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 14:14	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 14:14	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 14:14	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 14:14	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 14:14	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 14:14	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 14:14	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 14:14	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 14:14	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 14:14	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 14:14	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 14:14	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 14:14	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 14:14	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 14:14	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 14:14	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 14:14	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 14:14	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 14:14	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 14:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		72 - 124		11/09/19 14:14	1
Dibromofluoromethane	100		75 - 120		11/09/19 14:14	1
1,2-Dichloroethane-d4 (Surr)	109		75 - 126		11/09/19 14:14	1
Toluene-d8 (Surr)	100		75 - 120		11/09/19 14:14	1

**Client Sample ID: B-1B**

**Lab Sample ID: 500-172579-11**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 14:40	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 14:40	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 14:40	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 14:40	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 14:40	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 14:40	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 14:40	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 14:40	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 14:40	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 14:40	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 14:40	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 14:40	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 14:40	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 14:40	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 14:40	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 14:40	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-1B**  
**Date Collected: 10/28/19 00:00**  
**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-11**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 14:40	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 14:40	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 14:40	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 14:40	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 14:40	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 14:40	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 14:40	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 14:40	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 14:40	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 14:40	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 14:40	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 14:40	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 14:40	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 14:40	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 14:40	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 14:40	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 14:40	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 14:40	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 14:40	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 14:40	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 14:40	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 14:40	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 14:40	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 14:40	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 14:40	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 14:40	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 14:40	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 14:40	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 14:40	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 14:40	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 14:40	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 14:40	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 14:40	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 14:40	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 14:40	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 14:40	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 14:40	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 14:40	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 14:40	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 14:40	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 14:40	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 14:40	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 14:40	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 14:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		72 - 124		11/09/19 14:40	1
Dibromofluoromethane	98		75 - 120		11/09/19 14:40	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 126		11/09/19 14:40	1
Toluene-d8 (Surr)	100		75 - 120		11/09/19 14:40	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-3**

**Lab Sample ID: 500-172579-12**

**Date Collected: 10/29/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 15:06	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 15:06	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 15:06	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 15:06	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 15:06	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 15:06	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 15:06	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 15:06	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 15:06	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 15:06	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 15:06	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 15:06	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 15:06	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 15:06	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 15:06	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 15:06	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 15:06	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 15:06	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 15:06	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 15:06	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 15:06	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 15:06	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 15:06	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 15:06	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 15:06	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 15:06	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 15:06	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 15:06	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 15:06	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 15:06	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 15:06	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 15:06	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 15:06	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 15:06	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 15:06	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 15:06	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 15:06	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 15:06	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 15:06	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 15:06	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 15:06	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 15:06	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 15:06	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 15:06	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 15:06	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 15:06	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 15:06	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 15:06	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 15:06	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-3**

**Lab Sample ID: 500-172579-12**

**Date Collected: 10/29/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 15:06	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 15:06	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 15:06	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 15:06	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 15:06	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 15:06	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 15:06	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 15:06	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 15:06	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 15:06	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 15:06	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	102		72 - 124					11/09/19 15:06	1
Dibromofluoromethane	99		75 - 120					11/09/19 15:06	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 126					11/09/19 15:06	1
Toluene-d8 (Surr)	101		75 - 120					11/09/19 15:06	1

**Client Sample ID: B-3A**

**Lab Sample ID: 500-172579-13**

**Date Collected: 10/29/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 15:32	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 15:32	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 15:32	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 15:32	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 15:32	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 15:32	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 15:32	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 15:32	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 15:32	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 15:32	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 15:32	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 15:32	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 15:32	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 15:32	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 15:32	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 15:32	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 15:32	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 15:32	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 15:32	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 15:32	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 15:32	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 15:32	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 15:32	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 15:32	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 15:32	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 15:32	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-3A**  
**Date Collected: 10/29/19 00:00**  
**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-13**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 15:32	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 15:32	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 15:32	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 15:32	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 15:32	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 15:32	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 15:32	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 15:32	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 15:32	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 15:32	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 15:32	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 15:32	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 15:32	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 15:32	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 15:32	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 15:32	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 15:32	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 15:32	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 15:32	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 15:32	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 15:32	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 15:32	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 15:32	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 15:32	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 15:32	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 15:32	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 15:32	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 15:32	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 15:32	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 15:32	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 15:32	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 15:32	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 15:32	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 15:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		72 - 124		11/09/19 15:32	1
Dibromofluoromethane	98		75 - 120		11/09/19 15:32	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 126		11/09/19 15:32	1
Toluene-d8 (Surr)	99		75 - 120		11/09/19 15:32	1

**Client Sample ID: B-10**  
**Date Collected: 10/28/19 00:00**  
**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-14**  
**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 15:58	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 15:58	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 15:58	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-10**

**Lab Sample ID: 500-172579-14**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 15:58	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 15:58	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 15:58	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 15:58	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 15:58	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 15:58	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 15:58	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 15:58	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 15:58	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 15:58	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 15:58	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 15:58	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 15:58	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 15:58	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 15:58	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 15:58	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 15:58	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 15:58	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 15:58	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 15:58	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 15:58	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 15:58	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 15:58	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 15:58	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 15:58	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 15:58	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 15:58	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 15:58	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 15:58	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 15:58	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 15:58	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 15:58	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 15:58	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 15:58	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 15:58	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 15:58	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 15:58	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 15:58	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 15:58	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 15:58	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 15:58	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 15:58	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 15:58	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 15:58	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 15:58	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 15:58	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 15:58	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 15:58	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 15:58	1



# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-10**

**Lab Sample ID: 500-172579-14**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 15:58	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 15:58	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 15:58	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 15:58	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 15:58	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 15:58	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 15:58	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 15:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		72 - 124					11/09/19 15:58	1
Dibromofluoromethane	98		75 - 120					11/09/19 15:58	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 126					11/09/19 15:58	1
Toluene-d8 (Surr)	101		75 - 120					11/09/19 15:58	1

**Client Sample ID: B-11**

**Lab Sample ID: 500-172579-15**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 16:24	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 16:24	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 16:24	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 16:24	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 16:24	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 16:24	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 16:24	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 16:24	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 16:24	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 16:24	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 16:24	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 16:24	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 16:24	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 16:24	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 16:24	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 16:24	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 16:24	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 16:24	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 16:24	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 16:24	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 16:24	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 16:24	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 16:24	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 16:24	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 16:24	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 16:24	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 16:24	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 16:24	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 16:24	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-11**

**Lab Sample ID: 500-172579-15**

Date Collected: 10/28/19 00:00

Matrix: Ground Water

Date Received: 10/30/19 09:30

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 16:24	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 16:24	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 16:24	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 16:24	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 16:24	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 16:24	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 16:24	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 16:24	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 16:24	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 16:24	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 16:24	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 16:24	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 16:24	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 16:24	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 16:24	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 16:24	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 16:24	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 16:24	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 16:24	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 16:24	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 16:24	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 16:24	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 16:24	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 16:24	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 16:24	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 16:24	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 16:24	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 16:24	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 16:24	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 16:24	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		72 - 124		11/09/19 16:24	1
Dibromofluoromethane	100		75 - 120		11/09/19 16:24	1
1,2-Dichloroethane-d4 (Surr)	108		75 - 126		11/09/19 16:24	1
Toluene-d8 (Surr)	99		75 - 120		11/09/19 16:24	1

**Client Sample ID: B-12**

**Lab Sample ID: 500-172579-16**

Date Collected: 10/28/19 00:00

Matrix: Ground Water

Date Received: 10/30/19 09:30

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 16:50	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 16:50	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 16:50	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 16:50	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 16:50	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 16:50	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-12**

**Lab Sample ID: 500-172579-16**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 16:50	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 16:50	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 16:50	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 16:50	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 16:50	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 16:50	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 16:50	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 16:50	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 16:50	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 16:50	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 16:50	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 16:50	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 16:50	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 16:50	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 16:50	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 16:50	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 16:50	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 16:50	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 16:50	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 16:50	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 16:50	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 16:50	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 16:50	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 16:50	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 16:50	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 16:50	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 16:50	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 16:50	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 16:50	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 16:50	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 16:50	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 16:50	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 16:50	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 16:50	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 16:50	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 16:50	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 16:50	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 16:50	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 16:50	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 16:50	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 16:50	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 16:50	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 16:50	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 16:50	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 16:50	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 16:50	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 16:50	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 16:50	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 16:50	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Client Sample ID: B-12

Date Collected: 10/28/19 00:00

Date Received: 10/30/19 09:30

## Lab Sample ID: 500-172579-16

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 16:50	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 16:50	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 16:50	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 16:50	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 16:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		72 - 124		11/09/19 16:50	1
Dibromofluoromethane	98		75 - 120		11/09/19 16:50	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 126		11/09/19 16:50	1
Toluene-d8 (Surr)	99		75 - 120		11/09/19 16:50	1

## Client Sample ID: B-13

Date Collected: 10/29/19 00:00

Date Received: 10/30/19 09:30

## Lab Sample ID: 500-172579-17

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 17:16	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 17:16	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 17:16	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 17:16	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 17:16	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 17:16	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 17:16	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 17:16	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 17:16	1
<b>Chloroform</b>	<b>1.6</b>	<b>J</b>	2.0	0.37	ug/L			11/09/19 17:16	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 17:16	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 17:16	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 17:16	1
<b>cis-1,2-Dichloroethene</b>	<b>3.7</b>		1.0	0.41	ug/L			11/09/19 17:16	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 17:16	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 17:16	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 17:16	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 17:16	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 17:16	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 17:16	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 17:16	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 17:16	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 17:16	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 17:16	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 17:16	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 17:16	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 17:16	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 17:16	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 17:16	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 17:16	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 17:16	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 17:16	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-13**

**Lab Sample ID: 500-172579-17**

**Date Collected: 10/29/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 17:16	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 17:16	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 17:16	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 17:16	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 17:16	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 17:16	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 17:16	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 17:16	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 17:16	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 17:16	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 17:16	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 17:16	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 17:16	1
<b>Tetrachloroethene</b>	<b>17</b>		1.0	0.37	ug/L			11/09/19 17:16	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 17:16	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 17:16	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 17:16	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 17:16	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 17:16	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 17:16	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 17:16	1
<b>Trichloroethene</b>	<b>3.8</b>		0.50	0.16	ug/L			11/09/19 17:16	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 17:16	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 17:16	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 17:16	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 17:16	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 17:16	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		72 - 124		11/09/19 17:16	1
Dibromofluoromethane	100		75 - 120		11/09/19 17:16	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 126		11/09/19 17:16	1
Toluene-d8 (Surr)	100		75 - 120		11/09/19 17:16	1

**Client Sample ID: B-13A**

**Lab Sample ID: 500-172579-18**

**Date Collected: 10/29/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 17:41	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 17:41	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 17:41	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 17:41	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 17:41	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 17:41	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 17:41	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 17:41	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 17:41	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-13A**

**Lab Sample ID: 500-172579-18**

**Date Collected: 10/29/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 17:41	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 17:41	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 17:41	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 17:41	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 17:41	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 17:41	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 17:41	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 17:41	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 17:41	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 17:41	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 17:41	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 17:41	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 17:41	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 17:41	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 17:41	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 17:41	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 17:41	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 17:41	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 17:41	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 17:41	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 17:41	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 17:41	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 17:41	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 17:41	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 17:41	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 17:41	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 17:41	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 17:41	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 17:41	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 17:41	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 17:41	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 17:41	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 17:41	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 17:41	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 17:41	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 17:41	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 17:41	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 17:41	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 17:41	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 17:41	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 17:41	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 17:41	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 17:41	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 17:41	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 17:41	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 17:41	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 17:41	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 17:41	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 17:41	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Client Sample ID: B-13A

Date Collected: 10/29/19 00:00

Date Received: 10/30/19 09:30

## Lab Sample ID: 500-172579-18

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 17:41	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 17:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		72 - 124					11/09/19 17:41	1
Dibromofluoromethane	99		75 - 120					11/09/19 17:41	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 126					11/09/19 17:41	1
Toluene-d8 (Surr)	99		75 - 120					11/09/19 17:41	1

## Client Sample ID: B-13B

Date Collected: 10/29/19 00:00

Date Received: 10/30/19 09:30

## Lab Sample ID: 500-172579-19

Matrix: Ground Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/10/19 09:42	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/10/19 09:42	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/10/19 09:42	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/10/19 09:42	1
Bromoform	<0.48		1.0	0.48	ug/L			11/10/19 09:42	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/10/19 09:42	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/10/19 09:42	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/10/19 09:42	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/10/19 09:42	1
Chloroform	<0.37		2.0	0.37	ug/L			11/10/19 09:42	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/10/19 09:42	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/10/19 09:42	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/10/19 09:42	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/10/19 09:42	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/10/19 09:42	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/10/19 09:42	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/10/19 09:42	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/10/19 09:42	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/10/19 09:42	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/10/19 09:42	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/10/19 09:42	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/10/19 09:42	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/10/19 09:42	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/10/19 09:42	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/10/19 09:42	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/10/19 09:42	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/10/19 09:42	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/10/19 09:42	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/10/19 09:42	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/10/19 09:42	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/10/19 09:42	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/10/19 09:42	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 09:42	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/10/19 09:42	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/10/19 09:42	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: B-13B**

**Lab Sample ID: 500-172579-19**

**Date Collected: 10/29/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/10/19 09:42	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/10/19 09:42	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 09:42	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/10/19 09:42	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/10/19 09:42	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 09:42	1
Styrene	<0.39		1.0	0.39	ug/L			11/10/19 09:42	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 09:42	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/10/19 09:42	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/10/19 09:42	1
<b>Tetrachloroethene</b>	<b>2.6</b>		1.0	0.37	ug/L			11/10/19 09:42	1
Toluene	<0.15		0.50	0.15	ug/L			11/10/19 09:42	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/10/19 09:42	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/10/19 09:42	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/10/19 09:42	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/10/19 09:42	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/10/19 09:42	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/10/19 09:42	1
<b>Trichloroethene</b>	<b>0.74</b>		0.50	0.16	ug/L			11/10/19 09:42	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/10/19 09:42	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/10/19 09:42	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/10/19 09:42	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/10/19 09:42	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/10/19 09:42	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/10/19 09:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		72 - 124		11/10/19 09:42	1
Dibromofluoromethane	102		75 - 120		11/10/19 09:42	1
1,2-Dichloroethane-d4 (Surr)	87		75 - 126		11/10/19 09:42	1
Toluene-d8 (Surr)	102		75 - 120		11/10/19 09:42	1

**Client Sample ID: MW-18A**

**Lab Sample ID: 500-172579-20**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/10/19 10:06	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/10/19 10:06	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/10/19 10:06	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/10/19 10:06	1
Bromoform	<0.48		1.0	0.48	ug/L			11/10/19 10:06	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/10/19 10:06	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/10/19 10:06	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/10/19 10:06	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/10/19 10:06	1
Chloroform	<0.37		2.0	0.37	ug/L			11/10/19 10:06	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/10/19 10:06	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/10/19 10:06	1

Eurofins TestAmerica, Chicago



# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-18A**

**Lab Sample ID: 500-172579-20**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/10/19 10:06	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/10/19 10:06	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/10/19 10:06	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/10/19 10:06	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/10/19 10:06	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/10/19 10:06	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/10/19 10:06	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/10/19 10:06	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/10/19 10:06	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/10/19 10:06	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/10/19 10:06	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/10/19 10:06	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/10/19 10:06	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/10/19 10:06	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/10/19 10:06	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/10/19 10:06	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/10/19 10:06	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/10/19 10:06	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/10/19 10:06	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/10/19 10:06	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 10:06	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/10/19 10:06	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/10/19 10:06	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/10/19 10:06	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/10/19 10:06	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 10:06	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/10/19 10:06	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/10/19 10:06	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 10:06	1
Styrene	<0.39		1.0	0.39	ug/L			11/10/19 10:06	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 10:06	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/10/19 10:06	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/10/19 10:06	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/10/19 10:06	1
Toluene	<0.15		0.50	0.15	ug/L			11/10/19 10:06	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/10/19 10:06	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/10/19 10:06	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/10/19 10:06	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/10/19 10:06	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/10/19 10:06	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/10/19 10:06	1
<b>Trichloroethene</b>	<b>0.80</b>		0.50	0.16	ug/L			11/10/19 10:06	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/10/19 10:06	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/10/19 10:06	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/10/19 10:06	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/10/19 10:06	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/10/19 10:06	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/10/19 10:06	1

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-18A**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-20**

**Matrix: Ground Water**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		72 - 124		11/10/19 10:06	1
Dibromofluoromethane	103		75 - 120		11/10/19 10:06	1
1,2-Dichloroethane-d4 (Surr)	92		75 - 126		11/10/19 10:06	1
Toluene-d8 (Surr)	101		75 - 120		11/10/19 10:06	1

**Client Sample ID: MW-19A**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-21**

**Matrix: Ground Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/10/19 10:30	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/10/19 10:30	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/10/19 10:30	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/10/19 10:30	1
Bromoform	<0.48		1.0	0.48	ug/L			11/10/19 10:30	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/10/19 10:30	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/10/19 10:30	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/10/19 10:30	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/10/19 10:30	1
Chloroform	<0.37		2.0	0.37	ug/L			11/10/19 10:30	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/10/19 10:30	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/10/19 10:30	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/10/19 10:30	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/10/19 10:30	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/10/19 10:30	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/10/19 10:30	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/10/19 10:30	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/10/19 10:30	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/10/19 10:30	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/10/19 10:30	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/10/19 10:30	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/10/19 10:30	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/10/19 10:30	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/10/19 10:30	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/10/19 10:30	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/10/19 10:30	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/10/19 10:30	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/10/19 10:30	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/10/19 10:30	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/10/19 10:30	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/10/19 10:30	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/10/19 10:30	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 10:30	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/10/19 10:30	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/10/19 10:30	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/10/19 10:30	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/10/19 10:30	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 10:30	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/10/19 10:30	1

Euromins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-19A**

**Lab Sample ID: 500-172579-21**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/10/19 10:30	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 10:30	1
Styrene	<0.39		1.0	0.39	ug/L			11/10/19 10:30	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 10:30	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/10/19 10:30	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/10/19 10:30	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/10/19 10:30	1
Toluene	<0.15		0.50	0.15	ug/L			11/10/19 10:30	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/10/19 10:30	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/10/19 10:30	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/10/19 10:30	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/10/19 10:30	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/10/19 10:30	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/10/19 10:30	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/10/19 10:30	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/10/19 10:30	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/10/19 10:30	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/10/19 10:30	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/10/19 10:30	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/10/19 10:30	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/10/19 10:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		72 - 124		11/10/19 10:30	1
Dibromofluoromethane	100		75 - 120		11/10/19 10:30	1
1,2-Dichloroethane-d4 (Surr)	91		75 - 126		11/10/19 10:30	1
Toluene-d8 (Surr)	98		75 - 120		11/10/19 10:30	1

**Client Sample ID: Discharge**

**Lab Sample ID: 500-172579-22**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/10/19 10:54	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/10/19 10:54	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/10/19 10:54	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/10/19 10:54	1
Bromoform	<0.48		1.0	0.48	ug/L			11/10/19 10:54	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/10/19 10:54	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/10/19 10:54	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/10/19 10:54	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/10/19 10:54	1
Chloroform	<0.37		2.0	0.37	ug/L			11/10/19 10:54	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/10/19 10:54	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/10/19 10:54	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/10/19 10:54	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/10/19 10:54	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/10/19 10:54	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/10/19 10:54	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: Discharge**

**Lab Sample ID: 500-172579-22**

**Date Collected: 10/28/19 00:00**

**Matrix: Ground Water**

**Date Received: 10/30/19 09:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/10/19 10:54	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/10/19 10:54	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/10/19 10:54	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/10/19 10:54	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/10/19 10:54	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/10/19 10:54	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/10/19 10:54	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/10/19 10:54	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/10/19 10:54	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/10/19 10:54	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/10/19 10:54	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/10/19 10:54	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/10/19 10:54	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/10/19 10:54	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/10/19 10:54	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/10/19 10:54	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 10:54	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/10/19 10:54	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/10/19 10:54	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/10/19 10:54	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/10/19 10:54	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 10:54	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/10/19 10:54	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/10/19 10:54	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 10:54	1
Styrene	<0.39		1.0	0.39	ug/L			11/10/19 10:54	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 10:54	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/10/19 10:54	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/10/19 10:54	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/10/19 10:54	1
Toluene	<0.15		0.50	0.15	ug/L			11/10/19 10:54	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/10/19 10:54	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/10/19 10:54	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/10/19 10:54	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/10/19 10:54	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/10/19 10:54	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/10/19 10:54	1
<b>Trichloroethene</b>	<b>0.75</b>		0.50	0.16	ug/L			11/10/19 10:54	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/10/19 10:54	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/10/19 10:54	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/10/19 10:54	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/10/19 10:54	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/10/19 10:54	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/10/19 10:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		72 - 124		11/10/19 10:54	1
Dibromofluoromethane	104		75 - 120		11/10/19 10:54	1
1,2-Dichloroethane-d4 (Surr)	88		75 - 126		11/10/19 10:54	1
Toluene-d8 (Surr)	101		75 - 120		11/10/19 10:54	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-19 DUP**

**Lab Sample ID: 500-172579-23**

Date Collected: 10/28/19 00:00

Matrix: Ground Water

Date Received: 10/30/19 09:30

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/10/19 11:17	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/10/19 11:17	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/10/19 11:17	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/10/19 11:17	1
Bromoform	<0.48		1.0	0.48	ug/L			11/10/19 11:17	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/10/19 11:17	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/10/19 11:17	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/10/19 11:17	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/10/19 11:17	1
Chloroform	<0.37		2.0	0.37	ug/L			11/10/19 11:17	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/10/19 11:17	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/10/19 11:17	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/10/19 11:17	1
<b>cis-1,2-Dichloroethene</b>	<b>57</b>		1.0	0.41	ug/L			11/10/19 11:17	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/10/19 11:17	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/10/19 11:17	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/10/19 11:17	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/10/19 11:17	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/10/19 11:17	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/10/19 11:17	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/10/19 11:17	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/10/19 11:17	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/10/19 11:17	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/10/19 11:17	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/10/19 11:17	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/10/19 11:17	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/10/19 11:17	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/10/19 11:17	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/10/19 11:17	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/10/19 11:17	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/10/19 11:17	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/10/19 11:17	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 11:17	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/10/19 11:17	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/10/19 11:17	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/10/19 11:17	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/10/19 11:17	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 11:17	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/10/19 11:17	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/10/19 11:17	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 11:17	1
Styrene	<0.39		1.0	0.39	ug/L			11/10/19 11:17	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 11:17	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/10/19 11:17	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/10/19 11:17	1
<b>Tetrachloroethene</b>	<b>1.3</b>		1.0	0.37	ug/L			11/10/19 11:17	1
Toluene	<0.15		0.50	0.15	ug/L			11/10/19 11:17	1
<b>trans-1,2-Dichloroethene</b>	<b>0.67 J</b>		1.0	0.35	ug/L			11/10/19 11:17	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/10/19 11:17	1

# Client Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-19 DUP**

**Lab Sample ID: 500-172579-23**

Date Collected: 10/28/19 00:00

Matrix: Ground Water

Date Received: 10/30/19 09:30

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/10/19 11:17	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/10/19 11:17	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/10/19 11:17	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/10/19 11:17	1
<b>Trichloroethene</b>	<b>15</b>		0.50	0.16	ug/L			11/10/19 11:17	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/10/19 11:17	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/10/19 11:17	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/10/19 11:17	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/10/19 11:17	1
<b>Vinyl chloride</b>	<b>20</b>		1.0	0.20	ug/L			11/10/19 11:17	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/10/19 11:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		72 - 124		11/10/19 11:17	1
Dibromofluoromethane	100		75 - 120		11/10/19 11:17	1
1,2-Dichloroethane-d4 (Surr)	86		75 - 126		11/10/19 11:17	1
Toluene-d8 (Surr)	100		75 - 120		11/10/19 11:17	1

# Definitions/Glossary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Association Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## GC/MS VOA

### Analysis Batch: 514462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-172579-1	EXW-4	Total/NA	Ground Water	8260B	
500-172579-2	EXW-6	Total/NA	Ground Water	8260B	
500-172579-3	Muni #3	Total/NA	Ground Water	8260B	
500-172579-4	MW-17	Total/NA	Ground Water	8260B	
500-172579-5	MW-18	Total/NA	Ground Water	8260B	
500-172579-6	MW-19	Total/NA	Ground Water	8260B	
500-172579-7	MW-21	Total/NA	Ground Water	8260B	
500-172579-8	MW-21A	Total/NA	Ground Water	8260B	
500-172579-9	B-1	Total/NA	Ground Water	8260B	
500-172579-10	B-1A	Total/NA	Ground Water	8260B	
500-172579-11	B-1B	Total/NA	Ground Water	8260B	
500-172579-12	B-3	Total/NA	Ground Water	8260B	
500-172579-13	B-3A	Total/NA	Ground Water	8260B	
500-172579-14	B-10	Total/NA	Ground Water	8260B	
500-172579-15	B-11	Total/NA	Ground Water	8260B	
500-172579-16	B-12	Total/NA	Ground Water	8260B	
500-172579-17	B-13	Total/NA	Ground Water	8260B	
500-172579-18	B-13A	Total/NA	Ground Water	8260B	
MB 500-514462/6	Method Blank	Total/NA	Water	8260B	
LCS 500-514462/7	Lab Control Sample	Total/NA	Water	8260B	
500-172579-18 MS	B-13A	Total/NA	Ground Water	8260B	
500-172579-18 MSD	B-13A	Total/NA	Ground Water	8260B	

### Analysis Batch: 514502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-172579-19	B-13B	Total/NA	Ground Water	8260B	
500-172579-20	MW-18A	Total/NA	Ground Water	8260B	
500-172579-21	MW-19A	Total/NA	Ground Water	8260B	
500-172579-22	Discharge	Total/NA	Ground Water	8260B	
500-172579-23	MW-19 DUP	Total/NA	Ground Water	8260B	
MB 500-514502/6	Method Blank	Total/NA	Water	8260B	
LCS 500-514502/4	Lab Control Sample	Total/NA	Water	8260B	



# Surrogate Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Ground Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (72-124)	DBFM (75-120)	DCA (75-126)	TOL (75-120)
500-172579-1	EXW-4	101	95	102	103
500-172579-2	EXW-6	101	99	106	101
500-172579-3	Muni #3	99	97	103	102
500-172579-4	MW-17	101	96	100	102
500-172579-5	MW-18	105	95	103	102
500-172579-6	MW-19	100	98	101	103
500-172579-7	MW-21	102	97	102	100
500-172579-8	MW-21A	101	99	106	101
500-172579-9	B-1	104	98	106	99
500-172579-10	B-1A	103	100	109	100
500-172579-11	B-1B	100	98	105	100
500-172579-12	B-3	102	99	107	101
500-172579-13	B-3A	105	98	105	99
500-172579-14	B-10	106	98	104	101
500-172579-15	B-11	102	100	108	99
500-172579-16	B-12	107	98	107	99
500-172579-17	B-13	101	100	107	100
500-172579-18	B-13A	103	99	107	99
500-172579-18 MS	B-13A	104	102	107	100
500-172579-18 MSD	B-13A	102	102	105	101
500-172579-19	B-13B	90	102	87	102
500-172579-20	MW-18A	93	103	92	101
500-172579-21	MW-19A	92	100	91	98
500-172579-22	Discharge	90	104	88	101
500-172579-23	MW-19 DUP	90	100	86	100

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)  
DBFM = Dibromofluoromethane  
DCA = 1,2-Dichloroethane-d4 (Surr)  
TOL = Toluene-d8 (Surr)

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (72-124)	DBFM (75-120)	DCA (75-126)	TOL (75-120)
LCS 500-514462/7	Lab Control Sample	101	99	102	101
LCS 500-514502/4	Lab Control Sample	93	101	85	102
MB 500-514462/6	Method Blank	101	99	105	102
MB 500-514502/6	Method Blank	91	99	85	101

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)  
DBFM = Dibromofluoromethane  
DCA = 1,2-Dichloroethane-d4 (Surr)  
TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-514462/6**  
**Matrix: Water**  
**Analysis Batch: 514462**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/09/19 09:54	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/09/19 09:54	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/09/19 09:54	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/09/19 09:54	1
Bromoform	<0.48		1.0	0.48	ug/L			11/09/19 09:54	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/09/19 09:54	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/09/19 09:54	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/09/19 09:54	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/09/19 09:54	1
Chloroform	<0.37		2.0	0.37	ug/L			11/09/19 09:54	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/09/19 09:54	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/09/19 09:54	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/09/19 09:54	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/09/19 09:54	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/09/19 09:54	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/09/19 09:54	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/09/19 09:54	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/09/19 09:54	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/09/19 09:54	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/09/19 09:54	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/09/19 09:54	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/09/19 09:54	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/09/19 09:54	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/09/19 09:54	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/09/19 09:54	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/09/19 09:54	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/09/19 09:54	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/09/19 09:54	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/09/19 09:54	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/09/19 09:54	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/09/19 09:54	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/09/19 09:54	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 09:54	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/09/19 09:54	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/09/19 09:54	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/09/19 09:54	1
Naphthalene	<0.34		1.0	0.34	ug/L			11/09/19 09:54	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/09/19 09:54	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/09/19 09:54	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/09/19 09:54	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 09:54	1
Styrene	<0.39		1.0	0.39	ug/L			11/09/19 09:54	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/09/19 09:54	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/09/19 09:54	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/09/19 09:54	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/09/19 09:54	1
Toluene	<0.15		0.50	0.15	ug/L			11/09/19 09:54	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/09/19 09:54	1

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-514462/6**  
**Matrix: Water**  
**Analysis Batch: 514462**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/09/19 09:54	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/09/19 09:54	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/09/19 09:54	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/09/19 09:54	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/09/19 09:54	1
Trichloroethene	<0.16		0.50	0.16	ug/L			11/09/19 09:54	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/09/19 09:54	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/09/19 09:54	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/09/19 09:54	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/09/19 09:54	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/09/19 09:54	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/09/19 09:54	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	101		72 - 124		11/09/19 09:54	1
Dibromofluoromethane	99		75 - 120		11/09/19 09:54	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 126		11/09/19 09:54	1
Toluene-d8 (Surr)	102		75 - 120		11/09/19 09:54	1

**Lab Sample ID: LCS 500-514462/7**  
**Matrix: Water**  
**Analysis Batch: 514462**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	50.0	43.1		ug/L		86	70 - 122
Bromochloromethane	50.0	44.7		ug/L		89	65 - 122
Bromodichloromethane	50.0	41.5		ug/L		83	69 - 120
Bromoform	50.0	35.5		ug/L		71	56 - 132
Bromomethane	50.0	31.3		ug/L		63	40 - 152
Carbon tetrachloride	50.0	39.2		ug/L		78	59 - 133
Chlorobenzene	50.0	44.6		ug/L		89	70 - 120
Chloroethane	50.0	48.0		ug/L		96	48 - 136
Chloroform	50.0	42.4		ug/L		85	70 - 120
Chloromethane	50.0	67.3		ug/L		135	56 - 152
2-Chlorotoluene	50.0	44.9		ug/L		90	70 - 125
4-Chlorotoluene	50.0	45.2		ug/L		90	68 - 124
cis-1,2-Dichloroethene	50.0	45.4		ug/L		91	70 - 125
cis-1,3-Dichloropropene	50.0	41.8		ug/L		84	64 - 127
Dibromochloromethane	50.0	41.7		ug/L		83	68 - 125
1,2-Dibromo-3-Chloropropane	50.0	41.0		ug/L		82	56 - 123
1,2-Dibromoethane	50.0	43.0		ug/L		86	70 - 125
Dibromomethane	50.0	42.4		ug/L		85	70 - 120
1,2-Dichlorobenzene	50.0	44.7		ug/L		89	70 - 125
1,3-Dichlorobenzene	50.0	44.5		ug/L		89	70 - 125
1,4-Dichlorobenzene	50.0	44.3		ug/L		89	70 - 120
Dichlorodifluoromethane	50.0	37.6		ug/L		75	40 - 159
1,1-Dichloroethane	50.0	49.8		ug/L		100	70 - 125

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-514462/7**  
**Matrix: Water**  
**Analysis Batch: 514462**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	50.0	48.3		ug/L		97	68 - 127
1,1-Dichloroethene	50.0	42.5		ug/L		85	67 - 122
1,2-Dichloropropane	50.0	52.5		ug/L		105	67 - 130
1,3-Dichloropropane	50.0	43.0		ug/L		86	62 - 136
2,2-Dichloropropane	50.0	38.5		ug/L		77	58 - 139
1,1-Dichloropropene	50.0	43.5		ug/L		87	70 - 121
Ethylbenzene	50.0	44.3		ug/L		89	70 - 123
Hexachlorobutadiene	50.0	37.2		ug/L		74	51 - 150
Isopropylbenzene	50.0	46.1		ug/L		92	70 - 126
Methylene Chloride	50.0	42.9		ug/L		86	69 - 125
Methyl tert-butyl ether	50.0	39.1		ug/L		78	55 - 123
Naphthalene	50.0	42.5		ug/L		85	53 - 144
n-Butylbenzene	50.0	46.0		ug/L		92	68 - 125
N-Propylbenzene	50.0	45.5		ug/L		91	69 - 127
p-Isopropyltoluene	50.0	46.9		ug/L		94	70 - 125
sec-Butylbenzene	50.0	46.2		ug/L		92	70 - 123
Styrene	50.0	45.7		ug/L		91	70 - 120
tert-Butylbenzene	50.0	46.4		ug/L		93	70 - 121
1,1,1,2-Tetrachloroethane	50.0	42.0		ug/L		84	70 - 125
1,1,2,2-Tetrachloroethane	50.0	43.3		ug/L		87	62 - 140
Tetrachloroethene	50.0	42.3		ug/L		85	70 - 128
Toluene	50.0	44.7		ug/L		89	70 - 125
trans-1,2-Dichloroethene	50.0	43.9		ug/L		88	70 - 125
trans-1,3-Dichloropropene	50.0	39.8		ug/L		80	62 - 128
1,2,3-Trichlorobenzene	50.0	40.2		ug/L		80	51 - 145
1,2,4-Trichlorobenzene	50.0	40.7		ug/L		81	57 - 137
1,1,1-Trichloroethane	50.0	40.9		ug/L		82	70 - 125
1,1,2-Trichloroethane	50.0	44.7		ug/L		89	71 - 130
Trichloroethene	50.0	48.4		ug/L		97	70 - 125
Trichlorofluoromethane	50.0	41.4		ug/L		83	55 - 128
1,2,3-Trichloropropane	50.0	45.7		ug/L		91	50 - 133
1,2,4-Trimethylbenzene	50.0	45.7		ug/L		91	70 - 123
1,3,5-Trimethylbenzene	50.0	46.3		ug/L		93	70 - 123
Vinyl chloride	50.0	51.1		ug/L		102	64 - 126
Xylenes, Total	100	86.9		ug/L		87	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		72 - 124
Dibromofluoromethane	99		75 - 120
1,2-Dichloroethane-d4 (Surr)	102		75 - 126
Toluene-d8 (Surr)	101		75 - 120

**Lab Sample ID: 500-172579-18 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 514462**

**Client Sample ID: B-13A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.15		50.0	46.1		ug/L		92	70 - 120

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-172579-18 MS**

**Matrix: Ground Water**

**Analysis Batch: 514462**

**Client Sample ID: B-13A**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Bromobenzene	<0.36		50.0	47.2		ug/L		94	70 - 122
Bromochloromethane	<0.43		50.0	48.6		ug/L		97	65 - 122
Bromodichloromethane	<0.37		50.0	43.9		ug/L		88	69 - 120
Bromoform	<0.48		50.0	36.5		ug/L		73	56 - 132
Bromomethane	<0.80		50.0	31.3		ug/L		63	40 - 152
Carbon tetrachloride	<0.38		50.0	38.4		ug/L		77	59 - 133
Chlorobenzene	<0.39		50.0	45.8		ug/L		92	70 - 120
Chloroethane	<0.51		50.0	41.0		ug/L		82	48 - 136
Chloroform	<0.37		50.0	44.8		ug/L		90	70 - 120
Chloromethane	<0.32		50.0	69.1		ug/L		138	56 - 152
2-Chlorotoluene	<0.31		50.0	47.4		ug/L		95	70 - 125
4-Chlorotoluene	<0.35		50.0	47.3		ug/L		95	68 - 124
cis-1,2-Dichloroethene	<0.41		50.0	47.8		ug/L		96	70 - 125
cis-1,3-Dichloropropene	<0.42		50.0	42.6		ug/L		85	64 - 127
Dibromochloromethane	<0.49		50.0	43.6		ug/L		87	68 - 125
1,2-Dibromo-3-Chloropropane	<2.0		50.0	42.1		ug/L		84	56 - 123
1,2-Dibromoethane	<0.39		50.0	45.9		ug/L		92	70 - 125
Dibromomethane	<0.27		50.0	45.0		ug/L		90	70 - 120
1,2-Dichlorobenzene	<0.33		50.0	47.4		ug/L		95	70 - 125
1,3-Dichlorobenzene	<0.40		50.0	46.7		ug/L		93	70 - 125
1,4-Dichlorobenzene	<0.36		50.0	45.7		ug/L		91	70 - 120
Dichlorodifluoromethane	<0.67		50.0	35.0		ug/L		70	40 - 159
1,1-Dichloroethane	<0.41		50.0	52.7		ug/L		105	70 - 125
1,2-Dichloroethane	<0.39		50.0	52.8		ug/L		106	68 - 127
1,1-Dichloroethene	<0.39		50.0	41.8		ug/L		84	67 - 122
1,2-Dichloropropane	<0.43		50.0	55.7		ug/L		111	67 - 130
1,3-Dichloropropane	<0.36		50.0	45.2		ug/L		90	62 - 136
2,2-Dichloropropane	<0.44		50.0	36.2		ug/L		72	58 - 139
1,1-Dichloropropene	<0.30		50.0	42.4		ug/L		85	70 - 121
Ethylbenzene	<0.18		50.0	44.5		ug/L		89	70 - 123
Hexachlorobutadiene	<0.45		50.0	36.5		ug/L		73	51 - 150
Isopropylbenzene	<0.39		50.0	47.8		ug/L		96	70 - 126
Methylene Chloride	<1.6		50.0	46.8		ug/L		94	69 - 125
Methyl tert-butyl ether	<0.39		50.0	41.9		ug/L		84	55 - 123
Naphthalene	<0.34		50.0	44.6		ug/L		89	53 - 144
n-Butylbenzene	<0.39		50.0	43.1		ug/L		86	68 - 125
N-Propylbenzene	<0.41		50.0	46.8		ug/L		94	69 - 127
p-Isopropyltoluene	<0.36		50.0	47.2		ug/L		94	70 - 125
sec-Butylbenzene	<0.40		50.0	47.0		ug/L		94	70 - 123
Styrene	<0.39		50.0	47.2		ug/L		94	70 - 120
tert-Butylbenzene	<0.40		50.0	48.0		ug/L		96	70 - 121
1,1,1,2-Tetrachloroethane	<0.46		50.0	43.9		ug/L		88	70 - 125
1,1,2,2-Tetrachloroethane	<0.40		50.0	47.6		ug/L		95	62 - 140
Tetrachloroethene	<0.37		50.0	41.3		ug/L		83	70 - 128
Toluene	<0.15		50.0	44.9		ug/L		90	70 - 125
trans-1,2-Dichloroethene	<0.35		50.0	44.7		ug/L		89	70 - 125
trans-1,3-Dichloropropene	<0.36		50.0	41.9		ug/L		84	62 - 128
1,2,3-Trichlorobenzene	<0.46		50.0	40.4		ug/L		81	51 - 145
1,2,4-Trichlorobenzene	<0.34		50.0	38.2		ug/L		76	57 - 137

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-172579-18 MS**

**Matrix: Ground Water**

**Analysis Batch: 514462**

**Client Sample ID: B-13A**

**Prep Type: Total/NA**

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result			Result	Qualifier				
1,1,1-Trichloroethane	<0.38		50.0	40.9		ug/L		82	70 - 125
1,1,2-Trichloroethane	<0.35		50.0	48.1		ug/L		96	71 - 130
Trichloroethene	<0.16		50.0	48.6		ug/L		97	70 - 125
Trichlorofluoromethane	<0.43		50.0	39.3		ug/L		79	55 - 128
1,2,3-Trichloropropane	<0.41		50.0	48.8		ug/L		98	50 - 133
1,2,4-Trimethylbenzene	<0.36		50.0	47.2		ug/L		94	70 - 123
1,3,5-Trimethylbenzene	<0.25		50.0	48.0		ug/L		96	70 - 123
Vinyl chloride	<0.20		50.0	50.8		ug/L		102	64 - 126
Xylenes, Total	<0.22		100	88.2		ug/L		88	70 - 125
Surrogate	MS %Recovery	MS Qualifier	MS Limits						
4-Bromofluorobenzene (Surr)	104		72 - 124						
Dibromofluoromethane	102		75 - 120						
1,2-Dichloroethane-d4 (Surr)	107		75 - 126						
Toluene-d8 (Surr)	100		75 - 120						

**Lab Sample ID: 500-172579-18 MSD**

**Matrix: Ground Water**

**Analysis Batch: 514462**

**Client Sample ID: B-13A**

**Prep Type: Total/NA**

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result			Result	Qualifier						
Benzene	<0.15		50.0	44.8		ug/L		90	70 - 120	3	20
Bromobenzene	<0.36		50.0	45.8		ug/L		92	70 - 122	3	20
Bromochloromethane	<0.43		50.0	48.2		ug/L		96	65 - 122	1	20
Bromodichloromethane	<0.37		50.0	43.9		ug/L		88	69 - 120	0	20
Bromoform	<0.48		50.0	35.4		ug/L		71	56 - 132	3	20
Bromomethane	<0.80		50.0	32.1		ug/L		64	40 - 152	3	20
Carbon tetrachloride	<0.38		50.0	36.7		ug/L		73	59 - 133	5	20
Chlorobenzene	<0.39		50.0	45.7		ug/L		91	70 - 120	0	20
Chloroethane	<0.51		50.0	43.3		ug/L		87	48 - 136	6	20
Chloroform	<0.37		50.0	43.8		ug/L		88	70 - 120	2	20
Chloromethane	<0.32		50.0	69.4		ug/L		139	56 - 152	0	20
2-Chlorotoluene	<0.31		50.0	47.0		ug/L		94	70 - 125	1	20
4-Chlorotoluene	<0.35		50.0	46.6		ug/L		93	68 - 124	2	20
cis-1,2-Dichloroethene	<0.41		50.0	47.8		ug/L		96	70 - 125	0	20
cis-1,3-Dichloropropene	<0.42		50.0	42.4		ug/L		85	64 - 127	0	20
Dibromochloromethane	<0.49		50.0	42.7		ug/L		85	68 - 125	2	20
1,2-Dibromo-3-Chloropropane	<2.0		50.0	40.4		ug/L		81	56 - 123	4	20
1,2-Dibromoethane	<0.39		50.0	44.1		ug/L		88	70 - 125	4	20
Dibromomethane	<0.27		50.0	44.6		ug/L		89	70 - 120	1	20
1,2-Dichlorobenzene	<0.33		50.0	46.5		ug/L		93	70 - 125	2	20
1,3-Dichlorobenzene	<0.40		50.0	46.2		ug/L		92	70 - 125	1	20
1,4-Dichlorobenzene	<0.36		50.0	45.2		ug/L		90	70 - 120	1	20
Dichlorodifluoromethane	<0.67		50.0	30.2		ug/L		60	40 - 159	15	20
1,1-Dichloroethane	<0.41		50.0	52.6		ug/L		105	70 - 125	0	20
1,2-Dichloroethane	<0.39		50.0	50.7		ug/L		101	68 - 127	4	20
1,1-Dichloroethene	<0.39		50.0	41.4		ug/L		83	67 - 122	1	20
1,2-Dichloropropane	<0.43		50.0	54.4		ug/L		109	67 - 130	2	20

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-172579-18 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 514462**

**Client Sample ID: B-13A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3-Dichloropropane	<0.36		50.0	44.5		ug/L		89	62 - 136	2	20
2,2-Dichloropropane	<0.44		50.0	36.3		ug/L		73	58 - 139	0	20
1,1-Dichloropropene	<0.30		50.0	40.5		ug/L		81	70 - 121	5	20
Ethylbenzene	<0.18		50.0	43.7		ug/L		87	70 - 123	2	20
Hexachlorobutadiene	<0.45		50.0	34.4		ug/L		69	51 - 150	6	20
Isopropylbenzene	<0.39		50.0	46.5		ug/L		93	70 - 126	3	20
Methylene Chloride	<1.6		50.0	45.5		ug/L		91	69 - 125	3	20
Methyl tert-butyl ether	<0.39		50.0	41.4		ug/L		83	55 - 123	1	20
Naphthalene	<0.34		50.0	44.4		ug/L		89	53 - 144	1	20
n-Butylbenzene	<0.39		50.0	43.8		ug/L		88	68 - 125	1	20
N-Propylbenzene	<0.41		50.0	45.2		ug/L		90	69 - 127	3	20
p-Isopropyltoluene	<0.36		50.0	45.9		ug/L		92	70 - 125	3	20
sec-Butylbenzene	<0.40		50.0	45.4		ug/L		91	70 - 123	4	20
Styrene	<0.39		50.0	46.7		ug/L		93	70 - 120	1	20
tert-Butylbenzene	<0.40		50.0	46.6		ug/L		93	70 - 121	3	20
1,1,1,2-Tetrachloroethane	<0.46		50.0	44.1		ug/L		88	70 - 125	0	20
1,1,2,2-Tetrachloroethane	<0.40		50.0	45.7		ug/L		91	62 - 140	4	20
Tetrachloroethene	<0.37		50.0	41.1		ug/L		82	70 - 128	0	20
Toluene	<0.15		50.0	44.8		ug/L		90	70 - 125	0	20
trans-1,2-Dichloroethene	<0.35		50.0	44.5		ug/L		89	70 - 125	1	20
trans-1,3-Dichloropropene	<0.36		50.0	40.4		ug/L		81	62 - 128	4	20
1,2,3-Trichlorobenzene	<0.46		50.0	41.6		ug/L		83	51 - 145	3	20
1,2,4-Trichlorobenzene	<0.34		50.0	39.8		ug/L		80	57 - 137	4	20
1,1,1-Trichloroethane	<0.38		50.0	39.6		ug/L		79	70 - 125	3	20
1,1,2-Trichloroethane	<0.35		50.0	46.6		ug/L		93	71 - 130	3	20
Trichloroethene	<0.16		50.0	48.1		ug/L		96	70 - 125	1	20
Trichlorofluoromethane	<0.43		50.0	39.5		ug/L		79	55 - 128	1	20
1,2,3-Trichloropropane	<0.41		50.0	47.0		ug/L		94	50 - 133	4	20
1,2,4-Trimethylbenzene	<0.36		50.0	47.1		ug/L		94	70 - 123	0	20
1,3,5-Trimethylbenzene	<0.25		50.0	47.8		ug/L		96	70 - 123	1	20
Vinyl chloride	<0.20		50.0	50.4		ug/L		101	64 - 126	1	20
Xylenes, Total	<0.22		100	87.5		ug/L		88	70 - 125	1	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	102		72 - 124
Dibromofluoromethane	102		75 - 120
1,2-Dichloroethane-d4 (Surr)	105		75 - 126
Toluene-d8 (Surr)	101		75 - 120

**Lab Sample ID: MB 500-514502/6**  
**Matrix: Water**  
**Analysis Batch: 514502**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			11/10/19 08:54	1
Bromobenzene	<0.36		1.0	0.36	ug/L			11/10/19 08:54	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			11/10/19 08:54	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			11/10/19 08:54	1

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
 Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-514502/6**  
**Matrix: Water**  
**Analysis Batch: 514502**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bromoform	<0.48		1.0	0.48	ug/L			11/10/19 08:54	1
Bromomethane	<0.80		3.0	0.80	ug/L			11/10/19 08:54	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			11/10/19 08:54	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			11/10/19 08:54	1
Chloroethane	<0.51		1.0	0.51	ug/L			11/10/19 08:54	1
Chloroform	<0.37		2.0	0.37	ug/L			11/10/19 08:54	1
Chloromethane	<0.32		1.0	0.32	ug/L			11/10/19 08:54	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			11/10/19 08:54	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			11/10/19 08:54	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			11/10/19 08:54	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			11/10/19 08:54	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			11/10/19 08:54	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			11/10/19 08:54	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			11/10/19 08:54	1
Dibromomethane	<0.27		1.0	0.27	ug/L			11/10/19 08:54	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			11/10/19 08:54	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			11/10/19 08:54	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			11/10/19 08:54	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			11/10/19 08:54	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			11/10/19 08:54	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			11/10/19 08:54	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			11/10/19 08:54	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			11/10/19 08:54	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			11/10/19 08:54	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			11/10/19 08:54	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			11/10/19 08:54	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			11/10/19 08:54	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			11/10/19 08:54	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 08:54	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			11/10/19 08:54	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			11/10/19 08:54	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			11/10/19 08:54	1
Naphthalene	0.455	J	1.0	0.34	ug/L			11/10/19 08:54	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			11/10/19 08:54	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			11/10/19 08:54	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			11/10/19 08:54	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 08:54	1
Styrene	<0.39		1.0	0.39	ug/L			11/10/19 08:54	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			11/10/19 08:54	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			11/10/19 08:54	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			11/10/19 08:54	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			11/10/19 08:54	1
Toluene	<0.15		0.50	0.15	ug/L			11/10/19 08:54	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			11/10/19 08:54	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			11/10/19 08:54	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			11/10/19 08:54	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			11/10/19 08:54	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			11/10/19 08:54	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			11/10/19 08:54	1

Eurofins TestAmerica, Chicago



# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-514502/6**  
**Matrix: Water**  
**Analysis Batch: 514502**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Trichloroethene	<0.16		0.50	0.16	ug/L			11/10/19 08:54	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			11/10/19 08:54	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			11/10/19 08:54	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			11/10/19 08:54	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			11/10/19 08:54	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			11/10/19 08:54	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			11/10/19 08:54	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	91		72 - 124		11/10/19 08:54	1
Dibromofluoromethane	99		75 - 120		11/10/19 08:54	1
1,2-Dichloroethane-d4 (Surr)	85		75 - 126		11/10/19 08:54	1
Toluene-d8 (Surr)	101		75 - 120		11/10/19 08:54	1

**Lab Sample ID: LCS 500-514502/4**  
**Matrix: Water**  
**Analysis Batch: 514502**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzene	50.0	49.5		ug/L		99	70 - 120
Bromobenzene	50.0	47.1		ug/L		94	70 - 122
Bromochloromethane	50.0	48.1		ug/L		96	65 - 122
Bromodichloromethane	50.0	43.3		ug/L		87	69 - 120
Bromoform	50.0	45.8		ug/L		92	56 - 132
Bromomethane	50.0	46.8		ug/L		94	40 - 152
Carbon tetrachloride	50.0	50.1		ug/L		100	59 - 133
Chlorobenzene	50.0	51.9		ug/L		104	70 - 120
Chloroethane	50.0	42.6		ug/L		85	48 - 136
Chloroform	50.0	44.7		ug/L		89	70 - 120
Chloromethane	50.0	43.5		ug/L		87	56 - 152
2-Chlorotoluene	50.0	47.8		ug/L		96	70 - 125
4-Chlorotoluene	50.0	47.5		ug/L		95	68 - 124
cis-1,2-Dichloroethene	50.0	51.3		ug/L		103	70 - 125
cis-1,3-Dichloropropene	50.0	46.8		ug/L		94	64 - 127
Dibromochloromethane	50.0	46.3		ug/L		93	68 - 125
1,2-Dibromo-3-Chloropropane	50.0	37.9		ug/L		76	56 - 123
1,2-Dibromoethane	50.0	46.1		ug/L		92	70 - 125
Dibromomethane	50.0	45.9		ug/L		92	70 - 120
1,2-Dichlorobenzene	50.0	48.3		ug/L		97	70 - 125
1,3-Dichlorobenzene	50.0	48.8		ug/L		98	70 - 125
1,4-Dichlorobenzene	50.0	48.3		ug/L		97	70 - 120
Dichlorodifluoromethane	50.0	40.4		ug/L		81	40 - 159
1,1-Dichloroethane	50.0	49.0		ug/L		98	70 - 125
1,2-Dichloroethane	50.0	43.8		ug/L		88	68 - 127
1,1-Dichloroethene	50.0	51.6		ug/L		103	67 - 122
1,2-Dichloropropane	50.0	50.0		ug/L		100	67 - 130
1,3-Dichloropropane	50.0	45.2		ug/L		90	62 - 136
2,2-Dichloropropane	50.0	47.3		ug/L		95	58 - 139

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-514502/4**

**Matrix: Water**

**Analysis Batch: 514502**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloropropene	50.0	48.5		ug/L		97	70 - 121
Ethylbenzene	50.0	50.9		ug/L		102	70 - 123
Hexachlorobutadiene	50.0	47.5		ug/L		95	51 - 150
Isopropylbenzene	50.0	48.1		ug/L		96	70 - 126
Methylene Chloride	50.0	48.4		ug/L		97	69 - 125
Methyl tert-butyl ether	50.0	45.4		ug/L		91	55 - 123
Naphthalene	50.0	44.0		ug/L		88	53 - 144
n-Butylbenzene	50.0	50.0		ug/L		100	68 - 125
N-Propylbenzene	50.0	49.9		ug/L		100	69 - 127
p-Isopropyltoluene	50.0	49.4		ug/L		99	70 - 125
sec-Butylbenzene	50.0	48.3		ug/L		97	70 - 123
Styrene	50.0	48.4		ug/L		97	70 - 120
tert-Butylbenzene	50.0	47.8		ug/L		96	70 - 121
1,1,1,2-Tetrachloroethane	50.0	50.4		ug/L		101	70 - 125
1,1,1,2,2-Tetrachloroethane	50.0	43.1		ug/L		86	62 - 140
Tetrachloroethene	50.0	52.3		ug/L		105	70 - 128
Toluene	50.0	51.6		ug/L		103	70 - 125
trans-1,2-Dichloroethene	50.0	52.5		ug/L		105	70 - 125
trans-1,3-Dichloropropene	50.0	44.1		ug/L		88	62 - 128
1,2,3-Trichlorobenzene	50.0	47.8		ug/L		96	51 - 145
1,2,4-Trichlorobenzene	50.0	49.1		ug/L		98	57 - 137
1,1,1-Trichloroethane	50.0	48.9		ug/L		98	70 - 125
1,1,2-Trichloroethane	50.0	46.1		ug/L		92	71 - 130
Trichloroethene	50.0	51.4		ug/L		103	70 - 125
Trichlorofluoromethane	50.0	43.8		ug/L		88	55 - 128
1,2,3-Trichloropropane	50.0	40.7		ug/L		81	50 - 133
1,2,4-Trimethylbenzene	50.0	46.2		ug/L		92	70 - 123
1,3,5-Trimethylbenzene	50.0	47.7		ug/L		95	70 - 123
Vinyl chloride	50.0	50.8		ug/L		102	64 - 126
Xylenes, Total	100	100		ug/L		100	70 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	93		72 - 124
Dibromofluoromethane	101		75 - 120
1,2-Dichloroethane-d4 (Surr)	85		75 - 126
Toluene-d8 (Surr)	102		75 - 120

# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: EXW-4**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-1**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 10:20	PMF	TAL CHI

**Client Sample ID: EXW-6**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-2**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 10:46	PMF	TAL CHI

**Client Sample ID: Muni #3**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-3**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 11:12	PMF	TAL CHI

**Client Sample ID: MW-17**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-4**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 11:38	PMF	TAL CHI

**Client Sample ID: MW-18**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-5**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 12:04	PMF	TAL CHI

**Client Sample ID: MW-19**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-6**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 12:30	PMF	TAL CHI

**Client Sample ID: MW-21**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-7**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 12:56	PMF	TAL CHI

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# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

**Client Sample ID: MW-21A**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-8**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 13:22	PMF	TAL CHI

**Client Sample ID: B-1**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-9**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 13:48	PMF	TAL CHI

**Client Sample ID: B-1A**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-10**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 14:14	PMF	TAL CHI

**Client Sample ID: B-1B**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-11**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 14:40	PMF	TAL CHI

**Client Sample ID: B-3**

**Date Collected: 10/29/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-12**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 15:06	PMF	TAL CHI

**Client Sample ID: B-3A**

**Date Collected: 10/29/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-13**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 15:32	PMF	TAL CHI

**Client Sample ID: B-10**

**Date Collected: 10/28/19 00:00**

**Date Received: 10/30/19 09:30**

**Lab Sample ID: 500-172579-14**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 15:58	PMF	TAL CHI

Eurofins TestAmerica, Chicago

# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Client Sample ID: B-11

Date Collected: 10/28/19 00:00

Date Received: 10/30/19 09:30

## Lab Sample ID: 500-172579-15

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 16:24	PMF	TAL CHI

## Client Sample ID: B-12

Date Collected: 10/28/19 00:00

Date Received: 10/30/19 09:30

## Lab Sample ID: 500-172579-16

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 16:50	PMF	TAL CHI

## Client Sample ID: B-13

Date Collected: 10/29/19 00:00

Date Received: 10/30/19 09:30

## Lab Sample ID: 500-172579-17

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 17:16	PMF	TAL CHI

## Client Sample ID: B-13A

Date Collected: 10/29/19 00:00

Date Received: 10/30/19 09:30

## Lab Sample ID: 500-172579-18

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514462	11/09/19 17:41	PMF	TAL CHI

## Client Sample ID: B-13B

Date Collected: 10/29/19 00:00

Date Received: 10/30/19 09:30

## Lab Sample ID: 500-172579-19

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514502	11/10/19 09:42	JLC	TAL CHI

## Client Sample ID: MW-18A

Date Collected: 10/28/19 00:00

Date Received: 10/30/19 09:30

## Lab Sample ID: 500-172579-20

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514502	11/10/19 10:06	JLC	TAL CHI

## Client Sample ID: MW-19A

Date Collected: 10/28/19 00:00

Date Received: 10/30/19 09:30

## Lab Sample ID: 500-172579-21

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514502	11/10/19 10:30	JLC	TAL CHI

# Lab Chronicle

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Client Sample ID: Discharge

Date Collected: 10/28/19 00:00

Date Received: 10/30/19 09:30

Lab Sample ID: 500-172579-22

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514502	11/10/19 10:54	JLC	TAL CHI

## Client Sample ID: MW-19 DUP

Date Collected: 10/28/19 00:00

Date Received: 10/30/19 09:30

Lab Sample ID: 500-172579-23

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	514502	11/10/19 11:17	JLC	TAL CHI

### Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: MSA Professional Services, Inc  
Project/Site: Minocqua Cleaners

Job ID: 500-172579-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State Program	999580010	08-31-20

1

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Address: \_\_\_\_\_

TAL-8210

Regulatory Program:  DW  NPDES  RCRA  Other:

<b>Client Contact</b> Company Name: <u>MSA Professional</u> Address: <u>1232 South Blvd.</u> City/State/Zip: <u>Barnett, WI 53913</u> Phone: <u>608-356-2771</u> Fax: _____ Project Name: <u>Minocqua Chemicals</u> Site: <u>Minocqua, WI</u> P O # _____		<b>Project Manager:</b> <u>Dick Luster</u> Tel/Email: _____		<b>Site Contact:</b> _____ Lab Contact: _____		Date: <u>10/28-29/19</u> Carrier: _____		COC No: _____ 1 of 2 COCs Sampler: _____ For Lab Use Only: Walk-in Client: _____ Lab Sampling: _____ Job / SDG No.: <u>500-172579</u>	
<b>Analysis Turnaround Time</b> <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		 500-172579 COC		Filtered Sample (Y/N) _____ Perform MS/MSD (Y/N) _____ <u>Y/N</u>		Sample Specific Notes: _____			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)
1 EXW-4	10/28	29/19	G	6W	3	N	X
2 EXW-6							X
3 Muni #3							X
4 MW-17							X
5 MW-18							X
6 MW-19							X
7 MW-21							X
8 MW-21A							X
9 B-1							X
10 B-1A							X
11 B-1B							X
12 B-3							10/29

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other

**Possible Hazard Identification:**  
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

**Special Instructions/QC Requirements & Comments:**

Custody Seals Intact  Yes  No  
 Custody Seal No.: \_\_\_\_\_ Cooler Temp. (°C): Obs'd: 24 Corr'd: \_\_\_\_\_ Therm ID No.: \_\_\_\_\_

Relinquished by: <u>[Signature]</u>	Company: <u>MSA</u>	Date/Time: <u>10/29/19</u>	Received by: _____	Company: _____	Date/Time: _____
Relinquished by: _____	Company: _____	Date/Time: _____	Received by: _____	Company: _____	Date/Time: _____
Relinquished by: _____	Company: _____	Date/Time: _____	Received in Laboratory by: <u>[Signature]</u>	Company: <u>TA-CET</u>	Date/Time: <u>10/30/19 0930</u>



# Chain of Custody Record 398560 eurofins

Environment Testing  
TestAmerica

Address: \_\_\_\_\_

TAL-8210

Regulatory Program:  DW  NPDES  RCRA  Other:

<b>Client Contact</b> Company Name: <u>MISA, Professional</u> Address: <u>1230 South Blvd</u> City/State/Zip: <u>Babylon, NY 11703</u> Phone: <u>609-356-2771</u> Fax: _____ Project Name: <u>Minocycline Clean-up</u> Site: <u>Minocycline, NY</u> P O # _____		<b>Project Manager:</b> <u>Dick Lupter</u> <b>Tel/Email:</b> _____ <b>Analysis Turnaround Time</b> <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1-week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		<b>Site Contact:</b> _____ <b>Lab Contact:</b> _____ Date: <u>10/28-29/19</u> Carrier: _____		COC No: <u>2</u> of <u>2</u> COCs Sampler: _____ For Lab Use Only: Walk-in Client: _____ Lab Sampling: _____ Job / SDG No.: <u>500-172579</u>					
<b>Sample Identification</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=Comp, G=Grab)</b>	<b>Matrix</b>	<b># of Cont.</b>	<b>Filtered Sample (Y/N)</b>	<b>Perform MS/MSD (Y/N)</b>	VDE 62 Lab		
13	B-3A	10/28	10/28-29/19	G	GW	3	N	X			
14	B-10	10/28						X			
15	B-11							X			
16	B-12							X			
17	B-13	10/29						X			
18	B-13A							X			
19	B-13B							X			
20	mw-18A	10/28						X			
21	mw-19A							X			
22	Discharge							X			
23	mw-19 Dup							X			
23	TriD Blank					2		X			
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other		Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown									
		Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months									
Special Instructions/QC Requirements & Comments:											
Custody Seal Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: _____		Cooler Temp. (°C): Obs'd: _____ Cor'd: _____		Therm ID No.: _____					
Relinquished by: <u>[Signature]</u>		Company: <u>MISA</u>		Date/Time: <u>10/29/19</u>		Received by: _____		Company: _____		Date/Time: _____	
Relinquished by: _____		Company: _____		Date/Time: _____		Received by: _____		Company: _____		Date/Time: _____	
Relinquished by: _____		Company: _____		Date/Time: _____		Received in Laboratory by: <u>[Signature]</u>		Company: <u>TA-CHE</u>		Date/Time: <u>10/30/19 0930</u>	

# Login Sample Receipt Checklist

Client: MSA Professional Services, Inc

Job Number: 500-172579-1

**Login Number: 172579**

**List Source: Eurofins TestAmerica, Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	No TB received
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

