

McKnight, Kevin - DNR

From: Miller, Anthony W. <awmiller@GFNET.com>
Sent: Monday, August 20, 2018 3:02 PM
To: McKnight, Kevin - DNR; DNR RR NER
Cc: 'Ryan Eley'; Kugle, Dennis F.
Subject: BRRTS - 02-71-547941_Koeller Center (47358.003)
Attachments: BRRTS 02-71-547941_Groundwater Monitoring Status Report_Koeller Center.pdf

Kevin –

Attached is a status report that summarizes the results of groundwater samples collected at the Koeller Center site in Oshkosh in January and August 2018 (BRRTS # 02-71-547941). Generally speaking, PCE concentrations measured in the groundwater in January and August were stable and/or had decreased, and we expect that trend to continue. As discussed in the report, we do not believe that additional investigation or remediation is warranted, two issues the WDNR raised in its June 20, 2017, letter to the Livesey Company denying site closure. The next round of samples will be collected in early 2019. If PCE concentrations in the groundwater remain stable or continue to decrease, we will submit a report with the site data and a request that the WDNR reconsider the site for closure.

We will send a hard copy of the attached report to you. Please review the report at your earliest convenience, and let me know if you have any questions.

Thanks,

Anthony W. Miller, P.S.S. | Project Manager | Senior Environmental Scientist
Gannett Fleming, Inc. | 8025 Excelsior Dr., Madison, WI 53717-1900
t 608.836.1500, ext 6716 | c 608.354.7730 | f 608.831.3337 | awmiller@gfnet.com
Excellence Delivered As Promised

From: Miller, Anthony W.
Sent: Thursday, August 16, 2018 1:30 PM
To: 'Ryan Eley' <reley@liveseyco.com>
Subject: Draft Status Report for Koeller One Site - 47358.003

Ryan –

Attached is a draft report summarizing the analytical results of groundwater samples collected in January and August 2018. Generally speaking, PCE concentrations over the last two rounds have been decreasing or stable in MW-1 and MW-3, the only wells that have historically contained PCE at concentrations above its NR 140 enforcement standard. As discussed in more detail in the report, if the decreasing PCE trend continues through the next round of samples, we believe that the site data could be submitted to the WDNR with a request that they reconsider the site for closure.

Please review the report at your earliest convenience and let me know if there are any changes you would like made before we send it to the WDNR. If possible, we would like to send it to the WDNR before the end of August.

Thanks,

Anthony W. Miller, P.S.S. | Project Manager | Senior Environmental Scientist
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August 20, 2018

File #47358.003

Mr. Kevin McKnight
Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
625 East County Road Y, Suite 700
Oshkosh, WI 54901-9731

Re: Groundwater Monitoring Status Report
Koeller Center, 1020 – 1142 South Koeller Street
Oshkosh, Wisconsin
BRRTS: 02-71-547941

Dear Mr. McKnight:

On behalf of Koeller One, LLC, Gannett Fleming, Inc. is submitting this groundwater monitoring status report for the former dry cleaner facility located at 1142 South Koeller Street in the Koeller Center shopping mall site in Oshkosh. Figure 1 is a site location map, and Figure 2 shows the area of investigation at this site.

This report follows our April 17, 2017, *Closure Request*; the Wisconsin Department of Natural Resources' (WDNR) June 20, 2017, letter to the Livesey Company, the owner of the Koeller Center, denying site closure; and our September 14, 2017, *Groundwater Monitoring Status Report*. In its June 2017 letter, the WDNR indicated that additional groundwater monitoring was necessary to establish whether the tetrachloroethylene (PCE) plume was stable or receding. This report summarizes the results of groundwater samples collected in January and August 2018.

Our September 2017 status report summarized the results of groundwater samples collected in July 2017 and addressed the other issues included in the WDNR's June 20th closure denial letter. Some of the text from the WDNR's June 2017 letter denying closure and GF's September 2017 status report responding to the WDNR's request for GF to evaluate the need for additional investigation and/or remediation are reproduced below to aid discussion as to what additional work is necessary to achieve site closure.

Recent Scope of Work (January – August 2018)

GF conducted the groundwater monitoring activities on January 7 and August 1, 2018, that included the following:

L:\CLERICAL\projects\47300\47358_Koeller One\003\proj_mgmt\corres\reports\awm_R47358_007_SR\status report.doc

Gannett Fleming, Inc.

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- Measuring groundwater elevations in all site wells – MW-1 through MW-7.
- Measuring remediation by natural attenuation (RNA) parameters MW-1 through MW-4 and MW-6. RNA parameters (dissolved oxygen [DO], oxidation-reduction potential [ORP], temperature, pH, and conductivity) were measured with a YSI 550 multi-meter in-situ in each of the wells prior to collecting groundwater samples (i.e. static conditions prior to purging), and then again after the well had been purged and sampled.
- Collecting groundwater samples from monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-6 for analyses of volatile organic compounds (VOCs). Duplicate samples were collected from MW-3 and MW-6 in January and August 2018, respectively.

Groundwater samples collected from each well were placed into laboratory-supplied containers with hydrochloric acid preservative. The groundwater samples were placed in a cooler with ice and shipped via overnight courier to Pace Analytical Laboratory of Green Bay, Wisconsin, for analysis of VOCs using EPA Method 8026B. The laboratory reports for groundwater samples collected in January and August 2018 are included with this report as Appendix A.

Field Measurements and Analytical Results

Table 1 presents the groundwater elevation data measured on January and August 2018 and contains all previous measurements. Figures 3 and 4 show the groundwater flow directions based on elevations measured in MW-1 through MW-7 on January 7 and August 1, 2018, respectively. As shown on Figures 3 and 4, the groundwater flow direction measured in January and August 2018 was to the north-northwest beneath the PCE source area, then to the northeast further downgradient. That groundwater flow direction is consistent with directions measured in April and July 2016 and July 2017.

Table 2 shows the analytical results of groundwater samples collected in January and August 2018 and contains the analytical results of samples previously collected from the monitoring wells on this site. PCE was the only compound measured in January and August at a concentration above its NR 140 enforcement standard (ES) of 5.0 µg/ℓ. Historically, only groundwater samples collected from MW-1 and MW-3 have contained PCE at concentrations above its NR 140 ES. The PCE concentrations measured in the initial (255 µg/ℓ) and duplicate samples (295 µg/ℓ) collected from MW-1 in July 2017 are the highest PCE concentrations measured on site. PCE concentrations in MW-1 decreased in January (192 µg/ℓ) and then again in August (162 µg/ℓ) 2018.

The highest PCE concentration measured in MW-3 was 48.7 µg/ℓ in December 2014. Since December 2014, PCE concentrations measured in MW-3 have ranged from 10.1 µg/ℓ in

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November 2016 to 37.6 µg/l in the duplicate sample collected in January 2018. The PCE concentration in MW-3 decreased in August 2018 to 29.1 µg/l.

PCE concentrations increased slightly in sidegradient well MW-2 between July 2017 (1.9 µg/l) and August 2018 (2.5 µg/l). Between July 2017 and August 2018, PCE concentrations decreased slightly in downgradient well MW-4 from 1.7 µg/l to 1.3 µg/l. The PCE concentration measured in downgradient well MW-6 in January 2018 was 2.6 µg/l, the highest PCE concentration measured in that well since it was first sampled in April 2016. The PCE concentrations measured in the initial and duplicate sample collected from MW-6 in August 2018 were 2.2 µg/l and 2.1 µg/l, respectively, slightly lower than the PCE concentration measured in January 2018.

Table 3 presents the results of the RNA parameters measured in January and August 2018 and includes all previous measurements collected from the site wells. The pH of the groundwater measured in source well MW-1 and downgradient well MW-3 has ranged from 6.7 to 7.9 s.u. since RNA parameters were first measured in June 2013. Dissolved oxygen concentrations in those wells have ranged from 0.39 to 3.82 mg/L since June 2013. The low dissolved oxygen concentrations and relatively neutral pH values indicate that the aquifer would be conducive to reductive dechlorination if amendments were made to increase the activity of the microbes that facilitate the breakdown of chlorinated ethenes.

Discussion and Proposed Work

In its June 20, 2017, letter to the Livesey Company denying GF's April 2017 closure request, the WDNR stated that additional work was necessary because PCE concentrations in the groundwater at that time had been increasing. Specifically, the WDNR's June 20, 2017, letter stated the following work was necessary and is shown in *italics*:

Need to Conduct Additional Groundwater Monitoring

Additional groundwater monitoring is needed in order to establish compliance with the closure criteria of ch. NR 726. If monitored natural attenuation is to be used as a remedial action, you need to determine whether there is a stable or receding plume. A groundwater monitoring plan which at a minimum consists of semi-annual groundwater monitoring at MW-1, MW-2, MW-3, MW-4 and MW-6 should be implemented.

Semi-annual groundwater samples were collected from MW-1 through MW-4 and MW-6 in January and August 2018. PCE concentrations measured in each of the wells in August 2018 were below historic high levels and, with minor exceptions, have shown an overall stable or decreasing trend over the past year. We plan to collect an additional round of groundwater

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samples from all site wells early in 2019. If PCE concentrations in those samples show a stable or decreasing trend, then we will submit a request for the WDNR to reconsider the site for closure.

Need to Define the Degree and Extent of Contamination

Additional groundwater monitoring may be needed in order to define the degree and extent of contamination. The Department recommends you evaluate the need for piezometer installation for vertical definition of the groundwater plume.

The text below in blue is taken verbatim from GF's September 2017 status report and responds to the WDNR's request to evaluate the need to install additional wells to define the extent and degree of the PCE plume in the groundwater:

"The lateral extent of PCE in the groundwater at concentrations above the NR 140 ES is defined by wells MW-2 and MW-4 through MW-7. As discussed in Gannett Fleming's January 2016 work plan, the PCE plume is likely several decades old, so we believe that if it has not already migrated to the locations of downgradient wells MW-4 through MW-6, as demonstrated by the analytical results of groundwater samples collected through July 2017, it is unlikely to do so in the future. We therefore do not believe that additional monitoring wells are needed to determine the lateral extent of PCE in the groundwater.

PCE concentrations measured through August 2018 in down- and side-gradient wells MW-4 through MW-6 have been well below its NR 140 ES.

Regarding the WDNR's request to evaluate the need to install a piezometer to determine the vertical extent of PCE in the groundwater, we also do not believe that is necessary for the following reasons:

- The highest PCE concentration measured in the groundwater to date (295 µg/ℓ) is about 500 times less than the saturation concentration of PCE in groundwater (150,000 µg/ℓ). At concentrations above its saturation concentration, PCE becomes a dense non-aqueous phase liquid (DNAPL), and because the specific gravity of PCE (1.63 g/cm³) is denser than water (1.0 g/cm³), it will sink in an aquifer when present as a DNAPL, elongating the downward extent of the plume. However, PCE dissolved in the groundwater at low concentrations migrates with the predominant horizontal and vertical groundwater flow directions. As mentioned above, the highest concentration of PCE in the groundwater measured to date is about 500 times below the concentration where it would act as a DNAPL, so we don't believe it would have sunk deeper into the groundwater unless there was/is a strong vertical gradient to facilitate that movement.

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- We also do not believe there is a strong downward vertical gradient present at the site. We believe that the dense till beneath the site inhibits the lateral and vertical migration of groundwater in general and PCE in particular. This is exemplified by the ability to bail several of the monitoring wells dry while purging them before the groundwater samples are collected. The hydraulic conductivity of the till is 2.8×10^{-5} cm/sec based on bail-down recovery tests conducted on MW-1. The low hydraulic conductivity limits the downward migration of dissolved-phase PCE in the groundwater, much as it has limited its horizontal migration.
- As would be expected with any conceptual site model for this type of site, the highest concentrations of PCE in the groundwater would occur in the capillary fringe above the water table where the PCE plume in vadose zone soil intersects with the groundwater. Under that conceptual site model/scenario, when a new PCE plume in the vadose zone first impacts the water table, the highest PCE concentrations in the groundwater would occur at the surface of the water table. Over time, PCE concentrations deeper in the aquifer may increase as 1) the water table fluctuates up and down and interacts with the PCE plume in the vadose zone and capillary fringe above the water table and, 2) a downward vertical gradient pulls the PCE downward.

While PCE concentrations have increased in MW-1 since it was installed in 2006, we believe that is due to the relatively large fluctuations in the elevation of the water table (over 6.6 feet), along with the construction features of the well itself. As shown in Table 1, since groundwater monitoring activities began in October 2006, the depth to groundwater measured in MW-1 has fluctuated between 11.05 and 17.71 feet below the top of the well casing. The well casing for MW-1 is 0.3 foot below the ground surface (ft bgs), so the depth to water in MW-1 has fluctuated from 11.35 to 18.01 ft bgs since it was first measured in October 2006. MW-1 was constructed with a 10-foot-long screen placed between 17 to 27 ft bgs; therefore, the screened interval of MW-1 is completely submerged below the water table except for periods when the depth to water was greater than 17 feet (16.70 ft below the top of its casing).

The relatively large fluctuation in the depth of the water caused the groundwater to interact with the higher PCE concentrations in the upper portion of the capillary fringe and vadose zone when the water table rose. When the elevation of the water table then decreased, the relatively high PCE concentrations in the groundwater were brought lower into the aquifer. The screened interval of MW-1 and the upper and lower elevations of the water table are shown on cross-sections A-A' and B-B' (Figures B.3.a.1 and B.3.a.2, respectively) included

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with GF's April 2017 Closure Request. Those figures are included with this (GF's September 2017 status) report as Appendix B.

Our belief is that the downward migration of PCE in the aquifer was aided by the fluctuation in the water table's elevation and also by MW-1 itself, which serves as a vertical conduit/preferential pathway through the till after the groundwater with the relatively high PCE concentrations gets into the well screen and filter pack. This belief is supported by the overall increasing trend in PCE concentrations measured in MW-1 since sampling began in October 2006.

As discussed in the closure report, the dry-cleaning facility at 1142 South Koeller Street operated from 1985 to 1994, so the PCE was released over 22 years ago. Had PCE migrated downward from the source area into the aquifer before MW-1 was installed, then one would have expected relatively elevated concentrations of PCE to have been already present in the portion of the aquifer that MW-1 is screened in before the first sample was collected. However, PCE concentrations slowly increased in pulses as the water table fluctuated over time. Had MW-1 been constructed so that its entire screened interval was within the upper and lower limits of the water table, we expect that the initial PCE concentrations measured in MW-1 would have been higher and that the trend in PCE concentrations in MW-1 would have been relatively more stable over time."

Appendix B contains a graph showing the PCE concentrations and depth to water (in feet below the top of casing) measured in MW-1 between October 2006 and August 2018. As shown on the graph, increases in PCE concentrations have generally followed periods when the water table was generally high, causing another pulse of PCE to be released from the capillary fringe into the groundwater.

The results of the groundwater samples collected in January and August 2018 support our belief that additional investigation is not necessary to conduct additional investigation activities to define the lateral or vertical extent of PCE in the groundwater.

Need to Conduct Additional Remedial Action

Additional remedial action is needed in order to comply with the closure criteria of ch. NR 726. You should evaluate the use of additional remedial action such as chemical injection to facilitate remediation in the event groundwater trends do not stabilize.

As mentioned in our September 2017 status report, GF and Koeller One, LLC evaluated the feasibility of injecting reducing reagents into the groundwater to degrade PCE. Based on the decreasing PCE concentrations measured in source area well MW-1 in January and August

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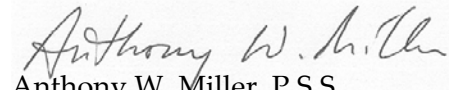
-7-

2018, we believe that the PCE plume is stable and the concentrations within it are decreasing. Therefore, we do not believe that additional remedial action is necessary.

The next round of samples is scheduled to be collected in early 2019. If the PCE concentrations in the site wells remain stable or continue to decrease, then we will submit the results of those samples with a request that the WDNR reconsider this site for closure. In the meantime, please review the enclosed information, and let us know if you have any questions or need additional information to complete your review.

Sincerely,

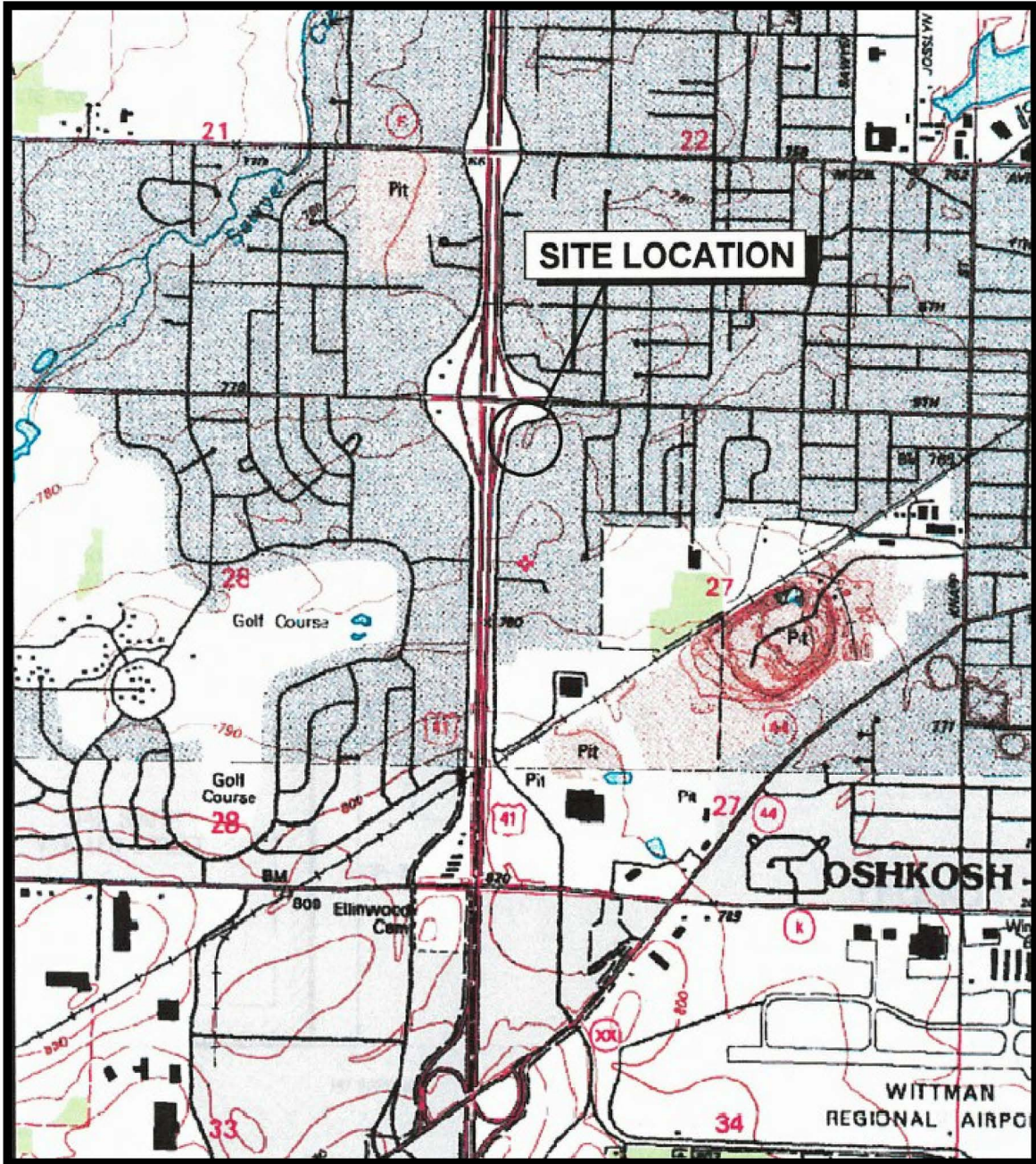
GANNETT FLEMING, INC.



Anthony W. Miller, P.S.S.
Senior Project Manager

AWM/jec
Enc.

ecc: Ryan Eley (Livesey Company, LLC)



SCALE: 1 INCH ~ 1800 FEET

7.5 MIN TOPOGRAPHIC MAP
OSHKOSH, WISCONSIN
1992



LOCATION MAP
KOELLER CENTER—OSHKOSH
KOELLER ONE, LLC
OSHKOSH, WISCONSIN

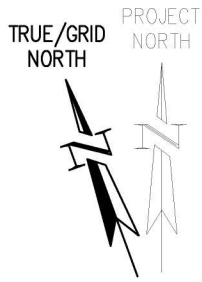


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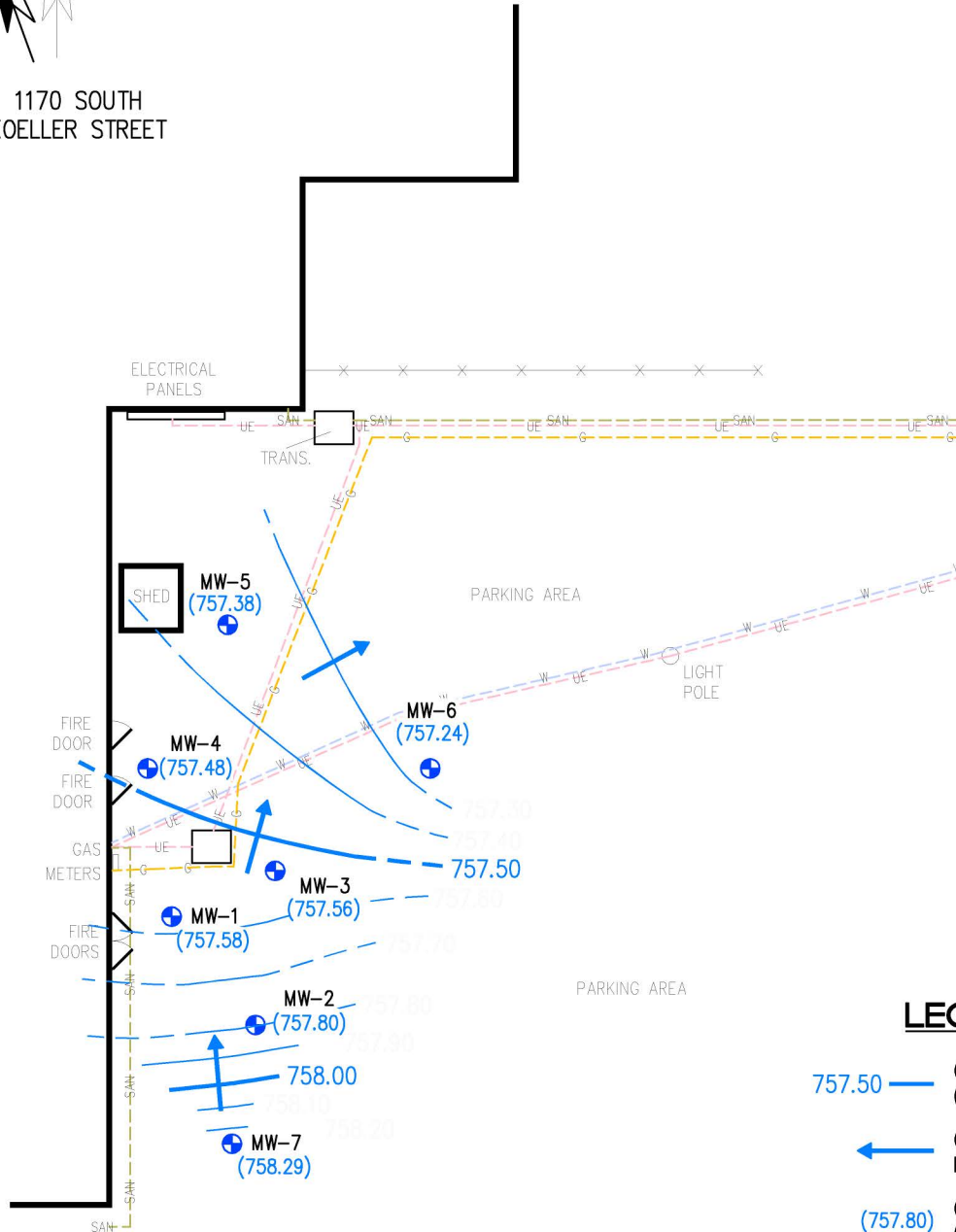
GOOGLE EARTH - 06/15



AERIAL MAP
KOELLER CENTER-OSHKOSH
KOELLER ONE, LLC
OSHKOSH, WISCONSIN



1170 SOUTH KOELLER STREET



LEGEND

- 757.50 — GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
- ← GROUNDWATER FLOW DIRECTION (1/8/18)
- (757.80) GROUNDWATER ELEVATION (1/8/18)
- ⊕ MONITORING WELL
- × FENCE
- G— NATURAL GAS
- UE— ELECTRICAL
- W— WATER LINE
- SAN— SANITARY

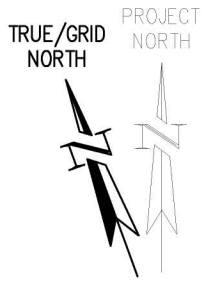


GROUNDWATER CONTOUR MAP (JANUARY 2018)

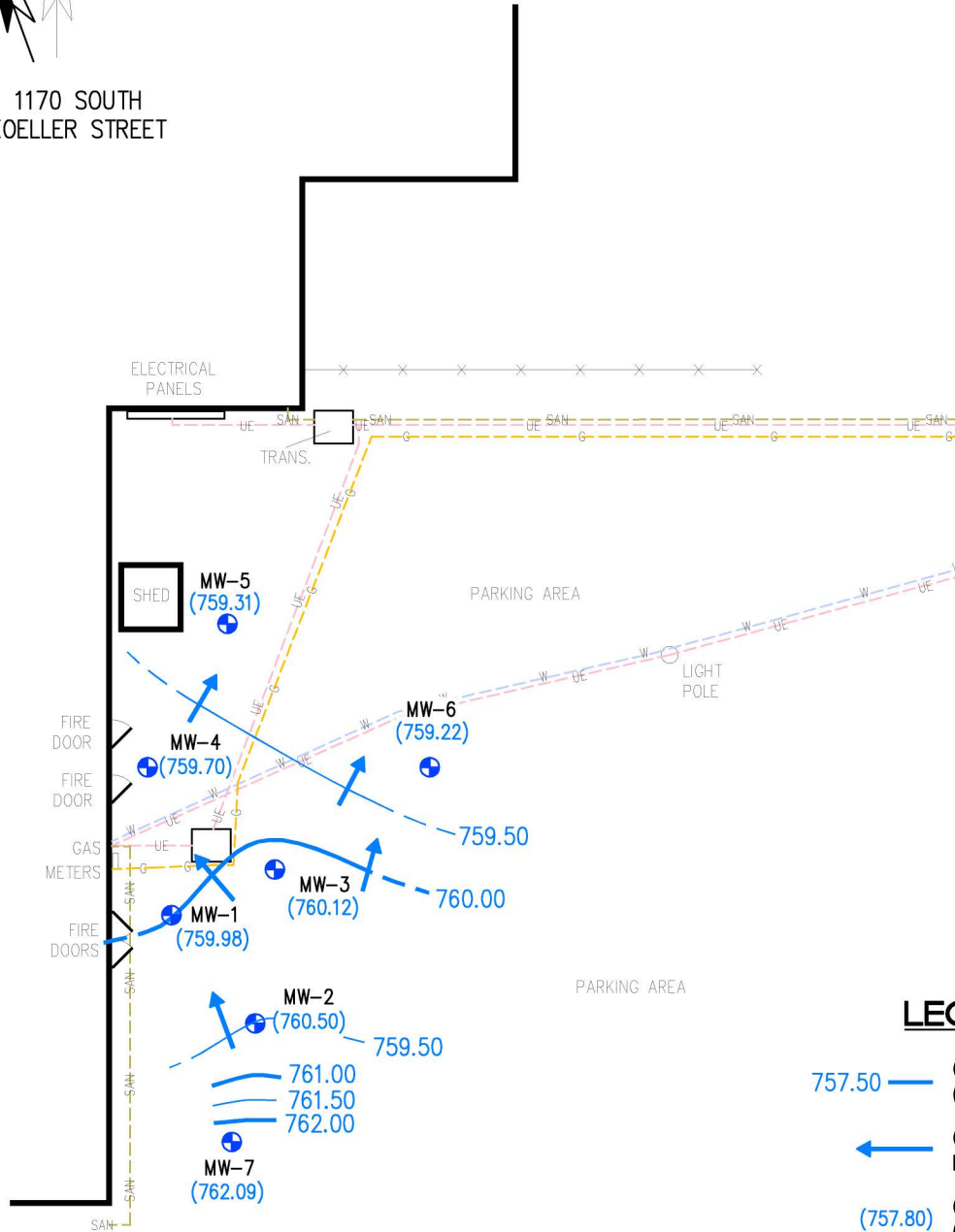
KOELLER CENTER—OSHKOSH
KOELLER ONE, LLC.
OSHKOSH, WISCONSIN

NOTE

1. LOCATIONS OF UTILITIES ARE APPROXIMATE.



1170 SOUTH KOELLER STREET



LEGEND

- 757.50 — GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
- ← GROUNDWATER FLOW DIRECTION (8/1/18)
- (757.80) GROUNDWATER ELEVATION (8/1/18)
- ⊕ MONITORING WELL
- × FENCE
- G— NATURAL GAS
- UE— ELECTRICAL
- W— WATER LINE
- SAN— SANITARY



GROUNDWATER CONTOUR MAP (AUGUST 2018)

KOELLER CENTER—OSHKOSH
 KOELLER ONE, LLC.
 OSHKOSH, WISCONSIN

NOTE

1. LOCATIONS OF UTILITIES ARE APPROXIMATE.

KOELLER ONE, LLC
 KOELLER SHOPPING CENTER
 OSHKOSH, WISCONSIN

TABLE 1

GROUNDWATER ELEVATIONS

Well ID	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7
Date Installed	9/7/2006	8/14/2008	8/14/2008	5/23/2013	3/28/2016	3/28/2016	3/28/2016
TOC Elevation ^(1,3)	774.19	773.87	774.17	774.25	774.10	773.57	774.04
Top of Screen	757.45	762.13	762.43	762.51	765.8	764.18	763.91
Bottom of Screen	747.45	747.13	747.43	747.51	750.8	749.18	748.91
Depth to Water (ft)							
10/31/06	16.44	NI	NI	NI	NI	NI	NI
01/10/07	15.82	NI	NI	NI	NI	NI	NI
05/17/07	14.62	NI	NI	NI	NI	NI	NI
08/14/08	14.45	NI	NI	NI	NI	NI	NI
08/21/08	15.20	14.42	14.97	NI	NI	NI	NI
01/28/09	17.71	17.10	17.56	NI	NI	NI	NI
04/08/09	12.71	11.81	12.36	NI	NI	NI	NI
06/14/13 ⁽²⁾	16.78	11.80	12.56	13.34	NI	NI	NI
09/12/13	15.11	14.55	15.25	15.35	NI	NI	NI
03/14/14	16.37	16.05	16.60	16.56	NI	NI	NI
07/10/14	11.84	11.10	11.62	12.20	NI	NI	NI
11/19/14	14.80	14.27	14.84	15.12	NI	NI	NI
12/04/14	14.59	13.95	14.61	14.88	NI	NI	NI
03/28/16	11.05	10.45	10.78	11.41	11.51	11.06	13.51
04/12/16	11.12	10.33	10.54	11.48	11.62	11.09	9.21
06/03/16	13.04	12.10	NM ⁽¹⁾	13.36	13.52	13.01	10.79
06/22/16	13.39	12.50	13.23	13.76	13.95	13.45	11.10
07/14/16	14.28	13.37	14.18	14.61	14.78	14.31	12.26
08/01/16	13.85	12.95	13.76	14.39	14.48	13.98	11.47
09/01/16	14.89	13.82	14.76	14.98	15.41	14.93	12.18
10/05/16	13.58	12.83	13.52	14.47	14.23	13.77	11.15
11/04/16	14.47	13.70	14.55	14.79	14.94	14.43	12.68
11/11/16	14.90	14.09	14.89	15.18	15.21	14.79	13.39
07/06/17	12.47	11.58	12.30	12.82	13.01	12.56	10.42
01/08/18	16.61	16.07	16.61	16.77	16.72	16.33	15.75
08/01/18	14.21	13.37	14.05	14.55	14.79	14.35	11.95
Water Elevation (ft amsl)							
10/31/06	757.75	NI	NI	NI	NI	NI	NI
01/10/07	758.37	NI	NI	NI	NI	NI	NI
05/17/07	759.57	NI	NI	NI	NI	NI	NI
08/14/08	759.74	NI	NI	NI	NI	NI	NI
08/21/08	758.99	759.45	759.2	NI	NI	NI	NI
01/28/09	756.48	756.77	756.61	NI	NI	NI	NI
04/08/09	761.48	762.06	761.81	NI	NI	NI	NI
06/14/13 ⁽²⁾	757.41	762.07	761.61	760.91	NI	NI	NI
09/12/13	759.08	759.32	758.92	758.90	NI	NI	NI
03/14/14	757.82	757.82	757.57	757.69	NI	NI	NI
07/10/14	762.35	762.77	762.55	762.05	NI	NI	NI
11/19/14	759.39	759.60	759.33	759.13	NI	NI	NI
12/04/14	759.60	759.92	759.56	759.37	NI	NI	NI
03/28/16	763.14	763.42	763.39	762.84	762.59	762.51	760.53

TABLE 1

GROUNDWATER ELEVATIONS

Well ID	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7
Date Installed	9/7/2006	8/14/2008	8/14/2008	5/23/2013	3/28/2016	3/28/2016	3/28/2016
TOC Elevation ^(1,3)	774.19	773.87	774.17	774.25	774.10	773.57	774.04
Top of Screen	757.45	762.13	762.43	762.51	765.8	764.18	763.91
Bottom of Screen	747.45	747.13	747.43	747.51	750.8	749.18	748.91
04/12/16	763.07	763.54	763.63	762.77	762.48	762.48	764.83
06/03/16	761.15	761.77	NM	760.89	760.58	760.56	763.25
06/22/16	760.80	761.37	760.94	760.49	760.15	760.12	762.94
07/14/16	759.91	760.50	759.99	759.64	759.32	759.26	761.78
08/01/16	760.34	760.92	760.41	759.86	759.62	759.59	762.57
09/01/16	759.30	760.05	759.41	759.27	758.69	758.64	761.86
10/05/16	760.61	761.04	760.65	759.78	759.87	759.80	762.89
11/04/16	759.72	760.17	759.62	759.46	759.16	759.14	761.36
11/11/16	759.29	759.78	759.28	759.07	758.89	758.78	760.65
07/06/17	761.72	762.29	761.87	761.43	761.09	761.01	763.62
01/08/18	757.58	757.80	757.56	757.48	757.38	757.24	758.29
08/01/18	759.98	760.50	760.12	759.70	759.31	759.22	762.09

NOTES:

TOC = Top of casing

NI = Not installed

amsl = above mean sea level

USGS Registered Benchmark = 776.04 feet amsl, top of nut of fire hydrant in front of Mitchell

Local Benchmark = 776.11 feet amsl, top of nut of fire hydrant, 240 feet east of MW-1.

FOOTNOTES:

(1) Revised top of well elevations for wells MW-1 through MW-4 surveyed were based on survey conducted on 3/14/14 using top of MW-1 well casing (774.19 ft msl) as benchmark.

(2) The inordinately deep groundwater elevation measured in MW-1 in June 2013 was likely due to field error caused by not allowing the water table to rise and stabilize after removing the air-tight cap. This phenomenon was discussed in more detail in Gannett Fleming's November 2013 *Site Investigation Report*.

(3) Wells MW-5, -6, and -7 were installed and surveyed on March 28, 2016. The top of MW-1 well casing (774.19 ft msl) was used as a benchmark. The top nut of the fire hydrant, approximately 240 feet east of MW-1, was measured at 776.10 feet amsl on 03/28/2016 and 4/12/2016.

KOELLER ONE, LLC
KOELLER SHOPPING CENTER
OSHKOSH, WISCONSIN

TABLE 2

SUMMARY OF DETECTED VOCs IN GROUNDWATER

Date	PCE	TCE	Dichloro- difluoro- methane	1,2,4-Tri- methyl- benzene	Benzene	Ethyl- benzene	Xylenes	Styrene	Toluene
NR 140 PAL	0.5	0.5	200	96	0.5	140	1,000	10	200
NR 140 ES	5.0	5.0	1,000	480	5.0	700	10,000	100	1,000
MW-1									
09/06/06	<0.50	<0.50	NA	NA	<0.50	<0.50	<1.0	NA	<0.50
10/31/06	2.95	0.27	0.90	<0.15	<0.15	<0.10	<0.50	<0.10	<0.40
01/10/07	14.8	<0.20	1.50	<0.15	<0.15	0.13 J	<0.50	<0.10	<0.40
05/17/07	12.0	<0.20	1.30	<0.20	<0.20	<0.10	<0.60	<0.10	<0.40
08/21/08	54.4	<0.40	1.95	<0.20	<0.20	<0.20	<0.60	<0.10	<0.40
01/28/09 ⁽¹⁾	36.4	<0.40	0.82 J	<0.20	<0.20	<0.20	<0.60	<0.10	<0.40
04/08/09	28.7	<0.40	1.22	<0.20	<0.20	<0.20	<0.60	<0.10	<0.40
06/14/13	89.4	<0.43	<0.40	<0.57	<0.50	<0.50	<0.82	<0.35	<0.44
09/12/13	94.4	<0.43	<0.40	<0.57	<0.50	<0.50	<0.82	<0.35	<0.44
03/13/14	50.1	<0.36	<0.40	<0.50	<0.50	<0.50	<0.82	<0.35	<0.44
07/10/14	92.3	<0.33	<0.20	<0.50	<0.50	<0.50	<0.82	<0.50	<0.50
12/04/14	110	<0.33	<0.20	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
04/12/16	185	<0.33	<0.20	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
11/11/16	213	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
07/06/17	255	<0.83	<0.56	<1.2	<1.2	<1.2	<3.7	<1.2	<1.2
07/06/17-Dup	295	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
01/08/18	192	<0.83	<0.56	<1.2	<1.2	<1.2	<3.7	<1.2	<1.2
08/01/18	162	<0.64	<1.2	<2.1	<0.62	<0.55	<1.85	<1.2	<0.43
MW-2									
08/21/08	0.88 J	<0.40	1.62	<0.20	<0.20	<0.20	<0.60	<0.10	<0.40
01/28/09 ⁽¹⁾	0.53 J	<0.40	1.15	<0.20	<0.20	<0.20	<0.60	<0.10	<0.40
04/08/09	0.87 J	<0.40	1.12	<0.20	<0.20	<0.20	<0.60	<0.10	<0.40
06/14/13	1.5	<0.43	0.48 J	<0.57	<0.50	<0.50	<0.82	<0.35	<0.44
09/12/13	1.0	<0.43	0.45 J	<0.57	<0.50	<0.50	<0.82	<0.35	<0.44
03/13/14	0.88 J	<0.36	0.45 J	<0.50	<0.50	<0.50	<0.82	<0.35	<0.44
07/10/14	2.0	<0.33	0.43 J	<0.50	<0.50	<0.50	<0.82	<0.50	<0.50
12/04/14	1.1	<0.33	0.50 J	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
04/12/16	0.95 J	<0.33	0.44 J	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
11/11/16	1.6	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
07/06/17	1.9	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
01/08/18	2.0	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
08/01/18 ⁽²⁾	2.5	<0.26	<0.50	<0.84	<0.25	<0.22	<0.73	<0.47	<0.17

TABLE 2

SUMMARY OF DETECTED VOCs IN GROUNDWATER

Date	PCE	TCE	Dichloro-difluoro-methane	1,2,4-Tri-methyl-benzene	Benzene	Ethyl-benzene	Xylenes	Styrene	Toluene
NR 140 PAL	0.5	0.5	200	96	0.5	140	1,000	10	200
NR 140 ES	5.0	5.0	1,000	480	5.0	700	10,000	100	1,000
MW-3									
08/21/08	4.80	<0.40	0.36 J	0.22 J	0.88	1.09	4.39	0.14 J	2.21
01/28/09	3.80	<0.40	<0.30	0.21 J	0.27	0.72	2.62	0.12 J	0.65 J
04/08/09	7.12	<0.40	<0.30	<0.20	<0.20	0.36 J	1.34 J	<0.10	<0.40
06/14/13	8.9	<0.43	<0.40	<0.57	<0.50	<0.50	<0.82	<0.35	<0.44
09/12/13	4.9	<0.43	<0.40	<0.57	<0.50	<0.50	<0.82	<0.35	<0.44
03/13/14	10	<0.36	<0.40	<0.50	<0.50	<0.50	<0.82	<0.35	<0.44
07/10/14	22.9	<0.33	<0.20	<0.50	<0.50	<0.50	<0.82	<0.50	<0.50
12/04/14	26.0	<0.33	<0.20	<0.50	<0.50	<0.50	<0.82	<0.50	<0.50
12/4/14 - Dup	48.7	<0.33	<0.20	<0.50	<0.50	<0.50	<0.82	<0.50	<0.50
04/12/16	18.6	<0.33	<0.20	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
11/11/16	10.1	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
07/06/17	28.7	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
01/08/18	33.9	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
01/8/18 - Dup	37.6	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
08/01/18	29.1	<0.26	<0.50	<0.84	<0.25	<0.22	<0.73	<0.47	<0.17
MW-4									
06/14/13	<0.47	<0.43	<0.40	<0.57	<0.50	<0.50	<0.82	<0.35	<0.44
06/14/13 - Dup	<0.47	<0.43	<0.40	<0.57	<0.50	<0.50	<0.82	<0.35	<0.44
09/12/13	0.77 J	<0.43	<0.40	<0.57	<0.50	<0.50	<0.82	<0.35	<0.44
09/12/13 - Dup	0.86 J	<0.43	<0.40	<0.57	<0.50	<0.50	<0.82	<0.35	<0.44
03/13/14	<0.47	<0.36	<0.40	<0.50	<0.50	<0.50	<0.82	<0.35	<0.44
03/13/14 - Dup	<0.47	<0.36	<0.40	<0.50	<0.50	<0.50	<0.82	<0.35	<0.44
07/10/14	1.3	<0.33	<0.20	<0.50	<0.50	<0.50	<0.82	<0.50	<0.50
12/04/14	0.77 J	<0.33	<0.20	<0.50	<0.50	<0.50	<0.82	<0.50	<0.50
04/12/16	1.2	<0.33	<0.20	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
11/11/16	0.98 J	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
07/06/17	1.7	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
01/08/18	<0.50	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
08/01/18 ⁽²⁾	1.3	<0.26	<0.50	<0.84	<0.25	<0.22	<0.73	<0.47	<0.17
MW-5									
04/12/16	<0.47	<0.33	<0.20	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
11/11/16	<0.50	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
MW-6									
04/12/16	<0.47	<0.33	<0.20	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
04/12/16 - Dup	<0.47	<0.33	<0.20	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
11/11/16	0.54 J	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
07/06/17	0.64 J	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
01/08/18	2.6	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
08/01/18 ⁽²⁾	2.2	<0.26	<0.50	<0.84	<0.25	<0.22	<0.73	<0.47	<0.17
08/01/18 - Dup ⁽²⁾	2.1	<0.26	<0.50	<0.84	<0.25	<0.22	<0.73	<0.47	<0.17

TABLE 2

SUMMARY OF DETECTED VOCs IN GROUNDWATER

Date	PCE	TCE	Dichloro-difluoro-methane	1,2,4-Tri-methyl-benzene	Benzene	Ethyl-benzene	Xylenes	Styrene	Toluene
NR 140 PAL	<i>0.5</i>	<i>0.5</i>	<i>200</i>	<i>96</i>	<i>0.5</i>	<i>140</i>	<i>1,000</i>	<i>10</i>	<i>200</i>
NR 140 ES	5.0	5.0	1,000	480	5.0	700	10,000	100	1,000
MW-7									
04/12/16	<0.47	<0.33	<0.20	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
11/11/16	<0.50	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50
11/11/16 - Dup	<0.50	<0.33	<0.22	<0.50	<0.50	<0.50	<1.50	<0.50	<0.50

NOTES:

Results are in micrograms per liter ($\mu\text{g}/\ell$).

All samples except those collected in September 2006 were analyzed for a full suite of volatile organic compounds using EPA Method 8021 or EPA 8260B. Only compounds detected in one or more samples are shown on this table.

J = Estimated concentration below laboratory quantitation level.

PCE = Tetrachloroethylene.

TCE = Trichloroethylene.

NA = Not analyzed.

NR 140 PAL & ES = NR 140 Preventative Action Limit and Enforcement Standard from Wisconsin Register January 2008, No. 625.

Concentrations above the NR 140 PAL are in italics and shaded; concentrations above the NR 140 ES are in bold.

FOOTNOTES:

(1) The trip blank used with the January 2009 samples contained 0.84 J $\mu\text{g}/\ell$ of chloromethane as did MW-1 (0.47 J $\mu\text{g}/\ell$) and MW-2 (1.27 $\mu\text{g}/\ell$).

(2) Methylene chloride was detected at concentrations above its method detection limit but below its quantitation limit in the groundwater samples collected August 2018 from MW-2 (at 1.0 $\mu\text{g}/\text{L}$), MW-4 (0.75 $\mu\text{g}/\text{L}$), and the two samples collected from MW-6 (1.4 and 0.72 $\mu\text{g}/\text{L}$).

KOELLER ONE, LLC
 KOELLER SHOPPING CENTER
 OSHKOSH, WISCONSIN

TABLE 3

SUMMARY OF HISTORICAL RNA DATA FIELD MEASUREMENTS

Sample ID and Date	Temperature (Celsius)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MW-1					
06/15/13	14.5	0.375	2.70	7.3	-36.2
09/12/13	15.4	0.623	2.07	7.6	-77.1
07/06/17	14.8	0.513	3.26	7.7	57.2
07/06/17 ⁽¹⁾	15.4	0.742	3.82	7.9	27.3
01/08/18	14.4	0.443	0.56	7.4	68.2
01/08/18 ⁽¹⁾	14.0	0.721	0.73	7.8	54.7
8/1/2018 ⁽²⁾	14.6	0.730	1.08	7.3	171.8
MW-2					
06/15/13	13.7	3.465	1.87	7.0	-22.9
09/12/13	15.6	2.964	3.49	6.9	-56.5
07/06/17	13.9	5.395	0.42	6.9	7.6
07/06/17 ⁽¹⁾	13.5	5.141	0.58	6.8	31.3
01/08/18	14.4	4.837	0.40	6.3	137.5
01/08/18 ⁽¹⁾	13.9	5.227	0.39	6.7	52.6
8/1/2018 ⁽²⁾	14.4	5.385	1.52	6.1	202.0
MW-3					
06/15/13	14.0	2.013	1.35	6.9	24.0
09/12/13	15.1	1.427	3.12	7.0	-22.7
07/06/17	14.4	3.871	1.54	6.9	39.3
07/06/17 ⁽¹⁾	14.2	3.456	2.65	7.1	89.5
01/08/18	10.3	2.732	0.65	6.7	92.7
01/08/18 ⁽¹⁾	13.4	2.323	1.87	7.2	65.8
8/1/2018 ⁽²⁾	14.9	0.754	0.55	7.0	144.1

TABLE 3

SUMMARY OF HISTORICAL RNA DATA FIELD MEASUREMENTS

Sample ID and Date	Temperature (Celsius)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
MW-4					
06/15/13	15.0	0.607	2.64	8.0	27.2
09/12/13	16.0	0.547	2.43	7.8	-6.3
07/06/17	15.9	0.676	2.65	7.8	11.6
07/06/17 ⁽¹⁾	14.5	0.551	0.68	7.8	55.0
01/08/18 ⁽¹⁾	13.0	0.494	1.82	7.7	77.5
8/1/2018 ⁽²⁾	15.7	0.456	1.18	7.4	171.9
MW-5					
07/06/17	16.1	1.660	4.9	7.3	34.3
MW-6					
07/06/17	14.4	3.095	0.33	7.1	14.8
07/06/17 ⁽¹⁾	14.2	2.850	0.34	7.0	43.4
01/08/18	13.6	1.343	0.23	6.8	135.0
01/08/18 ⁽¹⁾	13.8	1.385	0.74	7.3	61.1
8/1/2018 ⁽²⁾	13.4	1.263	0.68	6.9	162.8
MW-7					
07/06/17	15.5	6.310	2.52	6.9	77.7
8/1/2018 ⁽²⁾	16.8	7.926	2.23	6.9	184.1

NOTES:

RNA = Remediation through natural attenuation.

mg/l = milligrams per liter.

mS/cm = microSiemens per centimeter.

mV = millivolts

Water quality parameter data were collected using a YSI 556 multi-parameter meter.

FOOTNOTES:

(1) RNA parameters collected in-situ after purging and sampling.

(2) RNA parameters collected after purging and prior to sampling.

APPENDIX A

**ANALYTICAL RESULTS AND CHAIN OF CUSTODY RECORDS FOR GROUNDWATER
SAMPLES COLLECTED IN JANUARY & AUGUST 2018**

January 12, 2018

The laboratory report and
QA/QC data were
reviewed & approved by
AWM on 01/13/18

Tony Miller
Gannett Fleming
8025 Excelsior Drive
Madison, WI 53717

RE: Project: 47358.003 KOELLER ONE
Pace Project No.: 40163287

Dear Tony Miller:

Enclosed are the analytical results for sample(s) received by the laboratory on January 10, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Chelsea Payne, Gannett Fleming Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40163287001	MW-1	Water	01/07/18 14:00	01/10/18 09:15
40163287002	MW-2	Water	01/07/18 12:30	01/10/18 09:15
40163287003	MW-3	Water	01/07/18 13:20	01/10/18 09:15
40163287004	MW-3 DUP	Water	01/07/18 13:20	01/10/18 09:15
40163287005	MW-4	Water	01/07/18 15:30	01/10/18 09:15
40163287006	MW-6	Water	01/07/18 11:35	01/10/18 09:15
40163287007	TRIP BLANK	Water	01/07/18 00:00	01/10/18 09:15

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SAMPLE ANALYTE COUNT

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40163287001	MW-1	EPA 8260	LAP	63
40163287002	MW-2	EPA 8260	LAP	63
40163287003	MW-3	EPA 8260	LAP	63
40163287004	MW-3 DUP	EPA 8260	LAP	63
40163287005	MW-4	EPA 8260	LAP	63
40163287006	MW-6	EPA 8260	LAP	63
40163287007	TRIP BLANK	EPA 8260	LAP	63

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SUMMARY OF DETECTION

Project: 47358.003 KOELLER ONE
Pace Project No.: 40163287

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40163287001	MW-1					
EPA 8260	Tetrachloroethene	192	ug/L	2.5	01/11/18 16:35	
40163287002	MW-2					
EPA 8260	Tetrachloroethene	2.0	ug/L	1.0	01/11/18 15:04	
40163287003	MW-3					
EPA 8260	Tetrachloroethene	33.9	ug/L	1.0	01/11/18 15:27	
40163287004	MW-3 DUP					
EPA 8260	Tetrachloroethene	37.6	ug/L	1.0	01/11/18 15:50	
40163287006	MW-6					
EPA 8260	Tetrachloroethene	2.6	ug/L	1.0	01/11/18 16:12	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-1 Lab ID: 40163287001 Collected: 01/07/18 14:00 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	<0.45	ug/L	2.5	0.45	2.5		01/11/18 16:35	630-20-6	
1,1,1-Trichloroethane	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	71-55-6	
1,1,2,2-Tetrachloroethane	<0.62	ug/L	2.5	0.62	2.5		01/11/18 16:35	79-34-5	
1,1,2-Trichloroethane	<0.49	ug/L	2.5	0.49	2.5		01/11/18 16:35	79-00-5	
1,1-Dichloroethane	<0.60	ug/L	2.5	0.60	2.5		01/11/18 16:35	75-34-3	
1,1-Dichloroethene	<1.0	ug/L	2.5	1.0	2.5		01/11/18 16:35	75-35-4	
1,1-Dichloropropene	<1.1	ug/L	2.5	1.1	2.5		01/11/18 16:35	563-58-6	
1,2,3-Trichlorobenzene	<5.3	ug/L	12.5	5.3	2.5		01/11/18 16:35	87-61-6	
1,2,3-Trichloropropane	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	96-18-4	
1,2,4-Trichlorobenzene	<5.5	ug/L	12.5	5.5	2.5		01/11/18 16:35	120-82-1	
1,2,4-Trimethylbenzene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	95-63-6	
1,2-Dibromo-3-chloropropane	<5.4	ug/L	12.5	5.4	2.5		01/11/18 16:35	96-12-8	
1,2-Dibromoethane (EDB)	<0.44	ug/L	2.5	0.44	2.5		01/11/18 16:35	106-93-4	
1,2-Dichlorobenzene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	95-50-1	
1,2-Dichloroethane	<0.42	ug/L	2.5	0.42	2.5		01/11/18 16:35	107-06-2	
1,2-Dichloropropane	<0.58	ug/L	2.5	0.58	2.5		01/11/18 16:35	78-87-5	
1,3,5-Trimethylbenzene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	108-67-8	
1,3-Dichlorobenzene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	541-73-1	
1,3-Dichloropropane	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	142-28-9	
1,4-Dichlorobenzene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	106-46-7	
2,2-Dichloropropane	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	594-20-7	
2-Chlorotoluene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	95-49-8	
4-Chlorotoluene	<0.53	ug/L	2.5	0.53	2.5		01/11/18 16:35	106-43-4	
Benzene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	71-43-2	
Bromobenzene	<0.58	ug/L	2.5	0.58	2.5		01/11/18 16:35	108-86-1	
Bromochloromethane	<0.85	ug/L	2.5	0.85	2.5		01/11/18 16:35	74-97-5	
Bromodichloromethane	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	75-27-4	
Bromoform	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	75-25-2	
Bromomethane	<6.1	ug/L	12.5	6.1	2.5		01/11/18 16:35	74-83-9	
Carbon tetrachloride	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	56-23-5	
Chlorobenzene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	108-90-7	
Chloroethane	<0.94	ug/L	2.5	0.94	2.5		01/11/18 16:35	75-00-3	
Chloroform	<6.2	ug/L	12.5	6.2	2.5		01/11/18 16:35	67-66-3	
Chloromethane	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	74-87-3	
Dibromochloromethane	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	124-48-1	
Dibromomethane	<1.1	ug/L	2.5	1.1	2.5		01/11/18 16:35	74-95-3	
Dichlorodifluoromethane	<0.56	ug/L	2.5	0.56	2.5		01/11/18 16:35	75-71-8	
Ethylbenzene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	100-41-4	
Hexachloro-1,3-butadiene	<5.3	ug/L	12.5	5.3	2.5		01/11/18 16:35	87-68-3	
Isopropylbenzene (Cumene)	<0.36	ug/L	2.5	0.36	2.5		01/11/18 16:35	98-82-8	
Methyl-tert-butyl ether	<0.44	ug/L	2.5	0.44	2.5		01/11/18 16:35	1634-04-4	
Methylene Chloride	<0.58	ug/L	2.5	0.58	2.5		01/11/18 16:35	75-09-2	
Naphthalene	<6.2	ug/L	12.5	6.2	2.5		01/11/18 16:35	91-20-3	
Styrene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	100-42-5	
Tetrachloroethene	192	ug/L	2.5	1.2	2.5		01/11/18 16:35	127-18-4	
Toluene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-1 **Lab ID: 40163287001** Collected: 01/07/18 14:00 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Trichloroethene	<0.83	ug/L	2.5	0.83	2.5		01/11/18 16:35	79-01-6	
Trichlorofluoromethane	<0.46	ug/L	2.5	0.46	2.5		01/11/18 16:35	75-69-4	
Vinyl chloride	<0.44	ug/L	2.5	0.44	2.5		01/11/18 16:35	75-01-4	
cis-1,2-Dichloroethene	<0.64	ug/L	2.5	0.64	2.5		01/11/18 16:35	156-59-2	
cis-1,3-Dichloropropene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	10061-01-5	
m&p-Xylene	<2.5	ug/L	5.0	2.5	2.5		01/11/18 16:35	179601-23-1	
n-Butylbenzene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	104-51-8	
n-Propylbenzene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	103-65-1	
o-Xylene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	95-47-6	
p-Isopropyltoluene	<1.2	ug/L	2.5	1.2	2.5		01/11/18 16:35	99-87-6	
sec-Butylbenzene	<5.5	ug/L	12.5	5.5	2.5		01/11/18 16:35	135-98-8	
tert-Butylbenzene	<0.45	ug/L	2.5	0.45	2.5		01/11/18 16:35	98-06-6	
trans-1,2-Dichloroethene	<0.64	ug/L	2.5	0.64	2.5		01/11/18 16:35	156-60-5	
trans-1,3-Dichloropropene	<0.57	ug/L	2.5	0.57	2.5		01/11/18 16:35	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	61-130		2.5		01/11/18 16:35	460-00-4	
Dibromofluoromethane (S)	106	%	67-130		2.5		01/11/18 16:35	1868-53-7	
Toluene-d8 (S)	94	%	70-130		2.5		01/11/18 16:35	2037-26-5	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-2 **Lab ID: 40163287002** Collected: 01/07/18 12:30 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		01/11/18 15:04	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		01/11/18 15:04	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		01/11/18 15:04	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		01/11/18 15:04	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		01/11/18 15:04	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		01/11/18 15:04	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		01/11/18 15:04	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 15:04	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		01/11/18 15:04	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		01/11/18 15:04	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		01/11/18 15:04	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		01/11/18 15:04	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		01/11/18 15:04	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		01/11/18 15:04	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		01/11/18 15:04	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		01/11/18 15:04	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		01/11/18 15:04	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		01/11/18 15:04	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		01/11/18 15:04	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		01/11/18 15:04	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		01/11/18 15:04	75-71-8	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		01/11/18 15:04	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		01/11/18 15:04	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		01/11/18 15:04	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		01/11/18 15:04	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		01/11/18 15:04	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	100-42-5	
Tetrachloroethene	2.0	ug/L	1.0	0.50	1		01/11/18 15:04	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-2 **Lab ID: 40163287002** Collected: 01/07/18 12:30 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Trichloroethene	<0.33	ug/L	1.0	0.33	1		01/11/18 15:04	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		01/11/18 15:04	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		01/11/18 15:04	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 15:04	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		01/11/18 15:04	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:04	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 15:04	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		01/11/18 15:04	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 15:04	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		01/11/18 15:04	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	61-130		1		01/11/18 15:04	460-00-4	
Dibromofluoromethane (S)	106	%	67-130		1		01/11/18 15:04	1868-53-7	
Toluene-d8 (S)	91	%	70-130		1		01/11/18 15:04	2037-26-5	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-3 **Lab ID: 40163287003** Collected: 01/07/18 13:20 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		01/11/18 15:27	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		01/11/18 15:27	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		01/11/18 15:27	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		01/11/18 15:27	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		01/11/18 15:27	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		01/11/18 15:27	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		01/11/18 15:27	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 15:27	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		01/11/18 15:27	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		01/11/18 15:27	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		01/11/18 15:27	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		01/11/18 15:27	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		01/11/18 15:27	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		01/11/18 15:27	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		01/11/18 15:27	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		01/11/18 15:27	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		01/11/18 15:27	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		01/11/18 15:27	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		01/11/18 15:27	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		01/11/18 15:27	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		01/11/18 15:27	75-71-8	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		01/11/18 15:27	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		01/11/18 15:27	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		01/11/18 15:27	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		01/11/18 15:27	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		01/11/18 15:27	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	100-42-5	
Tetrachloroethene	33.9	ug/L	1.0	0.50	1		01/11/18 15:27	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-3 **Lab ID: 40163287003** Collected: 01/07/18 13:20 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Trichloroethene	<0.33	ug/L	1.0	0.33	1		01/11/18 15:27	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		01/11/18 15:27	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		01/11/18 15:27	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 15:27	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		01/11/18 15:27	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:27	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 15:27	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		01/11/18 15:27	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 15:27	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		01/11/18 15:27	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	61-130		1		01/11/18 15:27	460-00-4	
Dibromofluoromethane (S)	109	%	67-130		1		01/11/18 15:27	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		01/11/18 15:27	2037-26-5	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-3 DUP **Lab ID: 40163287004** Collected: 01/07/18 13:20 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		01/11/18 15:50	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		01/11/18 15:50	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		01/11/18 15:50	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		01/11/18 15:50	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		01/11/18 15:50	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		01/11/18 15:50	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		01/11/18 15:50	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 15:50	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		01/11/18 15:50	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		01/11/18 15:50	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		01/11/18 15:50	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		01/11/18 15:50	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		01/11/18 15:50	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		01/11/18 15:50	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		01/11/18 15:50	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		01/11/18 15:50	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		01/11/18 15:50	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		01/11/18 15:50	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		01/11/18 15:50	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		01/11/18 15:50	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		01/11/18 15:50	75-71-8	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		01/11/18 15:50	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		01/11/18 15:50	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		01/11/18 15:50	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		01/11/18 15:50	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		01/11/18 15:50	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	100-42-5	
Tetrachloroethene	37.6	ug/L	1.0	0.50	1		01/11/18 15:50	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-3 DUP **Lab ID: 40163287004** Collected: 01/07/18 13:20 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Trichloroethene	<0.33	ug/L	1.0	0.33	1		01/11/18 15:50	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		01/11/18 15:50	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		01/11/18 15:50	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 15:50	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		01/11/18 15:50	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 15:50	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 15:50	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		01/11/18 15:50	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 15:50	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		01/11/18 15:50	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	61-130		1		01/11/18 15:50	460-00-4	
Dibromofluoromethane (S)	108	%	67-130		1		01/11/18 15:50	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		01/11/18 15:50	2037-26-5	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-4 **Lab ID: 40163287005** Collected: 01/07/18 15:30 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		01/11/18 12:49	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		01/11/18 12:49	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		01/11/18 12:49	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		01/11/18 12:49	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		01/11/18 12:49	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		01/11/18 12:49	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		01/11/18 12:49	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 12:49	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		01/11/18 12:49	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		01/11/18 12:49	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		01/11/18 12:49	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		01/11/18 12:49	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		01/11/18 12:49	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		01/11/18 12:49	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		01/11/18 12:49	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		01/11/18 12:49	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		01/11/18 12:49	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		01/11/18 12:49	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		01/11/18 12:49	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		01/11/18 12:49	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		01/11/18 12:49	75-71-8	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		01/11/18 12:49	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		01/11/18 12:49	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		01/11/18 12:49	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		01/11/18 12:49	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		01/11/18 12:49	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-4 **Lab ID: 40163287005** Collected: 01/07/18 15:30 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Trichloroethene	<0.33	ug/L	1.0	0.33	1		01/11/18 12:49	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		01/11/18 12:49	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		01/11/18 12:49	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 12:49	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		01/11/18 12:49	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 12:49	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 12:49	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		01/11/18 12:49	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 12:49	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		01/11/18 12:49	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	81	%	61-130		1		01/11/18 12:49	460-00-4	
Dibromofluoromethane (S)	107	%	67-130		1		01/11/18 12:49	1868-53-7	
Toluene-d8 (S)	97	%	70-130		1		01/11/18 12:49	2037-26-5	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-6 **Lab ID: 40163287006** Collected: 01/07/18 11:35 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		01/11/18 16:12	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		01/11/18 16:12	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		01/11/18 16:12	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		01/11/18 16:12	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		01/11/18 16:12	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		01/11/18 16:12	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		01/11/18 16:12	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 16:12	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		01/11/18 16:12	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		01/11/18 16:12	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		01/11/18 16:12	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		01/11/18 16:12	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		01/11/18 16:12	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		01/11/18 16:12	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		01/11/18 16:12	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		01/11/18 16:12	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		01/11/18 16:12	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		01/11/18 16:12	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		01/11/18 16:12	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		01/11/18 16:12	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		01/11/18 16:12	75-71-8	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		01/11/18 16:12	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		01/11/18 16:12	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		01/11/18 16:12	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		01/11/18 16:12	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		01/11/18 16:12	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	100-42-5	
Tetrachloroethene	2.6	ug/L	1.0	0.50	1		01/11/18 16:12	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: MW-6 **Lab ID: 40163287006** Collected: 01/07/18 11:35 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Trichloroethene	<0.33	ug/L	1.0	0.33	1		01/11/18 16:12	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		01/11/18 16:12	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		01/11/18 16:12	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 16:12	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		01/11/18 16:12	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 16:12	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 16:12	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		01/11/18 16:12	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 16:12	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		01/11/18 16:12	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	61-130		1		01/11/18 16:12	460-00-4	
Dibromofluoromethane (S)	105	%	67-130		1		01/11/18 16:12	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		01/11/18 16:12	2037-26-5	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: TRIP BLANK **Lab ID: 40163287007** Collected: 01/07/18 00:00 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		01/11/18 13:34	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		01/11/18 13:34	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		01/11/18 13:34	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		01/11/18 13:34	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		01/11/18 13:34	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		01/11/18 13:34	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		01/11/18 13:34	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 13:34	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		01/11/18 13:34	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		01/11/18 13:34	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		01/11/18 13:34	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		01/11/18 13:34	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		01/11/18 13:34	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		01/11/18 13:34	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		01/11/18 13:34	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		01/11/18 13:34	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		01/11/18 13:34	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		01/11/18 13:34	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		01/11/18 13:34	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		01/11/18 13:34	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		01/11/18 13:34	75-71-8	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		01/11/18 13:34	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		01/11/18 13:34	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		01/11/18 13:34	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		01/11/18 13:34	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		01/11/18 13:34	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Sample: TRIP BLANK **Lab ID: 40163287007** Collected: 01/07/18 00:00 Received: 01/10/18 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Trichloroethene	<0.33	ug/L	1.0	0.33	1		01/11/18 13:34	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		01/11/18 13:34	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		01/11/18 13:34	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 13:34	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		01/11/18 13:34	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		01/11/18 13:34	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		01/11/18 13:34	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		01/11/18 13:34	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		01/11/18 13:34	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		01/11/18 13:34	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	82	%	61-130		1		01/11/18 13:34	460-00-4	
Dibromofluoromethane (S)	107	%	67-130		1		01/11/18 13:34	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		01/11/18 13:34	2037-26-5	

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QUALITY CONTROL DATA

Project: 47358.003 KOELLER ONE
Pace Project No.: 40163287

QC Batch: 278871 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40163287001, 40163287002, 40163287003, 40163287004, 40163287005, 40163287006, 40163287007

METHOD BLANK: 1637666 Matrix: Water
Associated Lab Samples: 40163287001, 40163287002, 40163287003, 40163287004, 40163287005, 40163287006, 40163287007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	01/11/18 09:06	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	01/11/18 09:06	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	01/11/18 09:06	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	01/11/18 09:06	
1,1-Dichloroethane	ug/L	<0.24	1.0	01/11/18 09:06	
1,1-Dichloroethene	ug/L	<0.41	1.0	01/11/18 09:06	
1,1-Dichloropropene	ug/L	<0.44	1.0	01/11/18 09:06	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	01/11/18 09:06	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	01/11/18 09:06	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	01/11/18 09:06	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	01/11/18 09:06	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	01/11/18 09:06	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	01/11/18 09:06	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	01/11/18 09:06	
1,2-Dichloroethane	ug/L	<0.17	1.0	01/11/18 09:06	
1,2-Dichloropropane	ug/L	<0.23	1.0	01/11/18 09:06	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	01/11/18 09:06	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	01/11/18 09:06	
1,3-Dichloropropane	ug/L	<0.50	1.0	01/11/18 09:06	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	01/11/18 09:06	
2,2-Dichloropropane	ug/L	<0.48	1.0	01/11/18 09:06	
2-Chlorotoluene	ug/L	<0.50	1.0	01/11/18 09:06	
4-Chlorotoluene	ug/L	<0.21	1.0	01/11/18 09:06	
Benzene	ug/L	<0.50	1.0	01/11/18 09:06	
Bromobenzene	ug/L	<0.23	1.0	01/11/18 09:06	
Bromochloromethane	ug/L	<0.34	1.0	01/11/18 09:06	
Bromodichloromethane	ug/L	<0.50	1.0	01/11/18 09:06	
Bromoform	ug/L	<0.50	1.0	01/11/18 09:06	
Bromomethane	ug/L	<2.4	5.0	01/11/18 09:06	
Carbon tetrachloride	ug/L	<0.50	1.0	01/11/18 09:06	
Chlorobenzene	ug/L	<0.50	1.0	01/11/18 09:06	
Chloroethane	ug/L	<0.37	1.0	01/11/18 09:06	
Chloroform	ug/L	<2.5	5.0	01/11/18 09:06	
Chloromethane	ug/L	<0.50	1.0	01/11/18 09:06	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	01/11/18 09:06	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	01/11/18 09:06	
Dibromochloromethane	ug/L	<0.50	1.0	01/11/18 09:06	
Dibromomethane	ug/L	<0.43	1.0	01/11/18 09:06	
Dichlorodifluoromethane	ug/L	<0.22	1.0	01/11/18 09:06	
Ethylbenzene	ug/L	<0.50	1.0	01/11/18 09:06	
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	01/11/18 09:06	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 47358.003 KOELLER ONE
Pace Project No.: 40163287

METHOD BLANK: 1637666 Matrix: Water
Associated Lab Samples: 40163287001, 40163287002, 40163287003, 40163287004, 40163287005, 40163287006, 40163287007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	01/11/18 09:06	
m&p-Xylene	ug/L	<1.0	2.0	01/11/18 09:06	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	01/11/18 09:06	
Methylene Chloride	ug/L	<0.23	1.0	01/11/18 09:06	
n-Butylbenzene	ug/L	<0.50	1.0	01/11/18 09:06	
n-Propylbenzene	ug/L	<0.50	1.0	01/11/18 09:06	
Naphthalene	ug/L	<2.5	5.0	01/11/18 09:06	
o-Xylene	ug/L	<0.50	1.0	01/11/18 09:06	
p-Isopropyltoluene	ug/L	<0.50	1.0	01/11/18 09:06	
sec-Butylbenzene	ug/L	<2.2	5.0	01/11/18 09:06	
Styrene	ug/L	<0.50	1.0	01/11/18 09:06	
tert-Butylbenzene	ug/L	<0.18	1.0	01/11/18 09:06	
Tetrachloroethene	ug/L	<0.50	1.0	01/11/18 09:06	
Toluene	ug/L	<0.50	1.0	01/11/18 09:06	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	01/11/18 09:06	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	01/11/18 09:06	
Trichloroethene	ug/L	<0.33	1.0	01/11/18 09:06	
Trichlorofluoromethane	ug/L	<0.18	1.0	01/11/18 09:06	
Vinyl chloride	ug/L	<0.18	1.0	01/11/18 09:06	
4-Bromofluorobenzene (S)	%	86	61-130	01/11/18 09:06	
Dibromofluoromethane (S)	%	111	67-130	01/11/18 09:06	
Toluene-d8 (S)	%	96	70-130	01/11/18 09:06	

LABORATORY CONTROL SAMPLE: 1637667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.9	102	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.7	95	70-130	
1,1,2-Trichloroethane	ug/L	50	53.3	107	70-130	
1,1-Dichloroethane	ug/L	50	49.1	98	71-132	
1,1-Dichloroethene	ug/L	50	53.3	107	75-130	
1,2,4-Trichlorobenzene	ug/L	50	47.2	94	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	34.9	70	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	51.6	103	70-130	
1,2-Dichlorobenzene	ug/L	50	54.2	108	70-130	
1,2-Dichloroethane	ug/L	50	47.2	94	70-131	
1,2-Dichloropropane	ug/L	50	49.0	98	80-120	
1,3-Dichlorobenzene	ug/L	50	52.8	106	70-130	
1,4-Dichlorobenzene	ug/L	50	54.6	109	70-130	
Benzene	ug/L	50	50.1	100	73-145	
Bromodichloromethane	ug/L	50	50.4	101	70-130	
Bromoform	ug/L	50	60.7	121	67-130	
Bromomethane	ug/L	50	43.3	87	26-128	
Carbon tetrachloride	ug/L	50	56.8	114	70-133	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

LABORATORY CONTROL SAMPLE: 1637667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorobenzene	ug/L	50	58.4	117	70-130	
Chloroethane	ug/L	50	45.3	91	58-120	
Chloroform	ug/L	50	54.6	109	80-121	
Chloromethane	ug/L	50	37.2	74	40-127	
cis-1,2-Dichloroethene	ug/L	50	47.3	95	70-130	
cis-1,3-Dichloropropene	ug/L	50	46.7	93	70-130	
Dibromochloromethane	ug/L	50	59.8	120	70-130	
Dichlorodifluoromethane	ug/L	50	38.2	76	20-135	
Ethylbenzene	ug/L	50	54.5	109	87-129	
Isopropylbenzene (Cumene)	ug/L	50	57.7	115	70-130	
m&p-Xylene	ug/L	100	113	113	70-130	
Methyl-tert-butyl ether	ug/L	50	43.2	86	66-143	
Methylene Chloride	ug/L	50	45.7	91	70-130	
o-Xylene	ug/L	50	58.4	117	70-130	
Styrene	ug/L	50	58.5	117	70-130	
Tetrachloroethene	ug/L	50	57.8	116	70-130	
Toluene	ug/L	50	55.1	110	82-130	
trans-1,2-Dichloroethene	ug/L	50	49.9	100	75-132	
trans-1,3-Dichloropropene	ug/L	50	47.0	94	70-130	
Trichloroethene	ug/L	50	56.1	112	70-130	
Trichlorofluoromethane	ug/L	50	54.4	109	76-133	
Vinyl chloride	ug/L	50	44.2	88	57-136	
4-Bromofluorobenzene (S)	%			97	61-130	
Dibromofluoromethane (S)	%			101	67-130	
Toluene-d8 (S)	%			95	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1637675 1637676

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40163287005 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1,1,1-Trichloroethane	ug/L	<0.50	50	50	49.4	50.9	99	102	70-134	3	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	46.0	48.4	92	97	70-130	5	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	52.6	53.1	105	106	70-130	1	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	47.7	49.6	95	99	71-133	4	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	53.1	51.8	106	104	75-136	3	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	41.0	43.4	82	87	70-130	6	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	35.4	36.5	71	73	63-123	3	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	50.9	50.5	102	101	70-130	1	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	49.2	49.4	98	99	70-130	0	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	44.5	45.0	89	90	70-131	1	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	48.1	50.2	96	100	80-120	4	20	
1,3-Dichlorobenzene	ug/L	<0.50	50	50	47.9	48.5	96	97	70-130	1	20	
1,4-Dichlorobenzene	ug/L	<0.50	50	50	49.1	50.3	98	101	70-130	2	20	
Benzene	ug/L	<0.50	50	50	49.0	51.1	98	102	73-145	4	20	

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QUALITY CONTROL DATA

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Parameter	Units	40163287005		1637675		1637676		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Bromodichloromethane	ug/L	<0.50	50	50	51.0	51.8	102	104	70-130	2	20		
Bromoform	ug/L	<0.50	50	50	59.2	59.2	118	118	67-130	0	20		
Bromomethane	ug/L	<2.4	50	50	49.8	47.3	100	95	26-129	5	20		
Carbon tetrachloride	ug/L	<0.50	50	50	53.1	55.4	106	111	70-134	4	20		
Chlorobenzene	ug/L	<0.50	50	50	56.5	56.7	113	113	70-130	0	20		
Chloroethane	ug/L	<0.37	50	50	47.5	44.8	95	90	58-120	6	20		
Chloroform	ug/L	<2.5	50	50	52.9	54.1	106	108	80-121	2	20		
Chloromethane	ug/L	<0.50	50	50	42.0	35.7	84	71	40-128	16	20		
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	45.6	47.5	91	95	70-130	4	20		
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	48.1	48.0	96	96	70-130	0	20		
Dibromochloromethane	ug/L	<0.50	50	50	59.3	59.7	119	119	70-130	1	20		
Dichlorodifluoromethane	ug/L	<0.22	50	50	34.0	30.5	68	61	20-146	11	20		
Ethylbenzene	ug/L	<0.50	50	50	53.0	52.8	106	106	87-129	0	20		
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	56.0	55.5	112	111	70-130	1	20		
m&p-Xylene	ug/L	<1.0	100	100	110	109	110	109	70-130	1	20		
Methyl-tert-butyl ether	ug/L	<0.17	50	50	43.6	43.1	87	86	66-143	1	20		
Methylene Chloride	ug/L	<0.23	50	50	47.2	47.5	94	95	70-130	1	20		
o-Xylene	ug/L	<0.50	50	50	55.0	55.5	110	111	70-130	1	20		
Styrene	ug/L	<0.50	50	50	54.3	55.4	109	111	70-130	2	20		
Tetrachloroethene	ug/L	<0.50	50	50	55.8	54.9	112	110	70-130	1	20		
Toluene	ug/L	<0.50	50	50	55.1	54.7	110	109	82-131	1	20		
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	53.3	50.5	107	101	75-135	5	20		
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	46.9	44.6	94	89	70-130	5	20		
Trichloroethene	ug/L	<0.33	50	50	53.9	55.9	108	112	70-130	4	20		
Trichlorofluoromethane	ug/L	<0.18	50	50	54.1	52.1	108	104	76-150	4	20		
Vinyl chloride	ug/L	<0.18	50	50	48.3	43.5	97	87	56-143	10	20		
4-Bromofluorobenzene (S)	%						95	96	61-130				
Dibromofluoromethane (S)	%						103	102	67-130				
Toluene-d8 (S)	%						97	95	70-130				

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 47358.003 KOELLER ONE

Pace Project No.: 40163287

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40163287001	MW-1	EPA 8260	278871		
40163287002	MW-2	EPA 8260	278871		
40163287003	MW-3	EPA 8260	278871		
40163287004	MW-3 DUP	EPA 8260	278871		
40163287005	MW-4	EPA 8260	278871		
40163287006	MW-6	EPA 8260	278871		
40163287007	TRIP BLANK	EPA 8260	278871		

REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: Gannett Fleming
 Branch/Location: Madison, WI
 Project Contact: Anthony Miller
 Phone: 608-836-1500
 Project Number: 47358.003
 Project Name: Kaeller One
 Project State: WI
 Sampled By (Print): Chelsea Payne
 Sampled By (Sign): Chelsea Payne
 PO #:



UPPER MIDWEST REGION
 MN: 612-607-1700 WI: 920-469-2436

40163287

RMV

CHAIN OF CUSTODY

***Preservation Codes**
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?
(YES/NO)
 PRESERVATION
(CODE)*

Y/N	Pick Letter	Analyses Requested																
	B	8260 B																
		VOCs																

Quote #: 40163287
 Mail To Contact: Anthony Miller
 Mail To Company: Gannett Fleming
 Mail To Address: 8025 Excelsior Dr
Madison, WI 53711
 Invoice To Contact:
 Invoice To Company: See mail to
 Invoice To Address:
 Invoice To Phone: 608-836-1500
 CLIENT COMMENTS: 3-40mlv^B
 LAB COMMENTS (Lab Use Only): 1-40mlv^B
 Profile #:

Data Package Options (billable)
 EPA Level III
 EPA Level IV

MS/MSD
 On your sample (billable)
 NOT needed on your sample

Matrix Codes
 A = Air W = Water
 B = Biota DW = Drinking Water
 C = Charcoal GW = Ground Water
 O = Oil SW = Surface Water
 S = Soil WW = Waste Water
 SI = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Analyses Requested
		DATE	TIME		
001	MW-1	1/7/18	14:00	GW	3
002	MW-2		12:30		
003	MW-3		13:20		
004	MW-3 dup		"		
005	MW-4		15:30		
006	MW-6		11:35		
007	Trip Blank				1

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)
 Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Relinquished By: <u>Chelsea Payne</u>	Date/Time: <u>1/9/18 9:00</u>	Received By:	Date/Time:
Relinquished By: <u>CSL og 3123</u>	Date/Time: <u>1/10/18 0915</u>	Received By: <u>Chelsea Payne</u>	Date/Time: <u>1/10/18 0915</u>
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

Samples on HOLD are subject to special pricing and release of liability

PACE Project No. 40163287
 Receipt Temp = 22 °C
 Sample Receipt pH OK / Adjusted
 Cooler Custody Seal Present / Not Present
 Intact / Not Intact



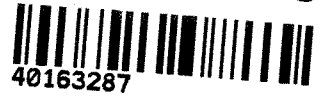
Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Client Name: Garnett Fleming

Project #: WO#: 40163287

Courier: Fed Ex UPS Client Pace Other DCS Logistics
Tracking #: 509-010918



Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Custody Seal on Samples Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used N/A Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: RoE ICorr: Biological Tissue is Frozen: yes no

Temp Blank Present: yes no

Person examining contents:
Date: 1/10/18
Initials: DS

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Comments:

Table with 15 rows for checklist items: Chain of Custody Present, Chain of Custody Filled Out, Chain of Custody Relinquished, Sampler Name & Signature on COC, Samples Arrived within Hold Time, Short Hold Time Analysis (<72hr), Rush Turn Around Time Requested, Sufficient Volume, Correct Containers Used, Containers Intact, Filtered volume received for Dissolved tests, Sample Labels match COC, All containers needing preservation have been checked, All containers needing preservation are found to be in compliance with EPA recommendation, Headspace in VOA Vials (>6mm), Trip Blank Present, Pace Trip Blank Lot # (if purchased).

Client Notification/ Resolution:
Person Contacted: Date/Time:
Comments/ Resolution:

Project Manager Review: RMR for DM Date: 1/10/18

August 07, 2018

The laboratory report and
QA/QC data were
reviewed & approved by
AWM on 08/08/18

Tony Miller
Gannett Fleming
8025 Excelsior Drive
Madison, WI 53717

RE: Project: 47358.003 KOELLER ONE
Pace Project No.: 40173494

Dear Tony Miller:

Enclosed are the analytical results for sample(s) received by the laboratory on August 03, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Chelsea Payne, Gannett Fleming Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40173494001	MW-1	Water	08/01/18 13:30	08/03/18 09:10
40173494002	MW-2	Water	08/01/18 11:20	08/03/18 09:10
40173494003	MW-3	Water	08/01/18 11:45	08/03/18 09:10
40173494004	MW-4	Water	08/01/18 13:15	08/03/18 09:10
40173494005	MW-6	Water	08/01/18 12:15	08/03/18 09:10
40173494006	MW-6 DUP	Water	08/01/18 12:15	08/03/18 09:10
40173494007	TRIP BLANK	Water	08/01/18 00:00	08/03/18 09:10

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SAMPLE ANALYTE COUNT

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40173494001	MW-1	EPA 8260	HNW	63
40173494002	MW-2	EPA 8260	HNW	63
40173494003	MW-3	EPA 8260	HNW	63
40173494004	MW-4	EPA 8260	HNW	63
40173494005	MW-6	EPA 8260	HNW	63
40173494006	MW-6 DUP	EPA 8260	HNW	63
40173494007	TRIP BLANK	EPA 8260	HNW	63

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 47358.003 KOELLER ONE
Pace Project No.: 40173494

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40173494001	MW-1					
EPA 8260	Tetrachloroethene	162	ug/L	2.7	08/06/18 13:04	
40173494002	MW-2					
EPA 8260	Methylene Chloride	1.0J	ug/L	1.9	08/06/18 13:25	
EPA 8260	Tetrachloroethene	2.5	ug/L	1.1	08/06/18 13:25	
40173494003	MW-3					
EPA 8260	Tetrachloroethene	29.1	ug/L	1.1	08/06/18 13:47	
40173494004	MW-4					
EPA 8260	Methylene Chloride	0.75J	ug/L	1.9	08/06/18 14:08	
EPA 8260	Tetrachloroethene	1.3	ug/L	1.1	08/06/18 14:08	
40173494005	MW-6					
EPA 8260	Methylene Chloride	1.4J	ug/L	1.9	08/06/18 14:30	
EPA 8260	Tetrachloroethene	2.2	ug/L	1.1	08/06/18 14:30	
40173494006	MW-6 DUP					
EPA 8260	Methylene Chloride	0.72J	ug/L	1.9	08/06/18 14:51	
EPA 8260	Tetrachloroethene	2.1	ug/L	1.1	08/06/18 14:51	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-1 **Lab ID: 40173494001** Collected: 08/01/18 13:30 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.67	ug/L	2.2	0.67	2.5		08/06/18 13:04	630-20-6	
1,1,1-Trichloroethane	<0.61	ug/L	2.0	0.61	2.5		08/06/18 13:04	71-55-6	
1,1,2,2-Tetrachloroethane	<0.69	ug/L	2.3	0.69	2.5		08/06/18 13:04	79-34-5	
1,1,2-Trichloroethane	<1.4	ug/L	4.6	1.4	2.5		08/06/18 13:04	79-00-5	
1,1-Dichloroethane	<0.68	ug/L	2.3	0.68	2.5		08/06/18 13:04	75-34-3	
1,1-Dichloroethene	<0.61	ug/L	2.0	0.61	2.5		08/06/18 13:04	75-35-4	
1,1-Dichloropropene	<1.4	ug/L	4.5	1.4	2.5		08/06/18 13:04	563-58-6	
1,2,3-Trichlorobenzene	<1.6	ug/L	5.2	1.6	2.5		08/06/18 13:04	87-61-6	
1,2,3-Trichloropropane	<1.5	ug/L	4.9	1.5	2.5		08/06/18 13:04	96-18-4	
1,2,4-Trichlorobenzene	<2.4	ug/L	7.9	2.4	2.5		08/06/18 13:04	120-82-1	
1,2,4-Trimethylbenzene	<2.1	ug/L	7.0	2.1	2.5		08/06/18 13:04	95-63-6	
1,2-Dibromo-3-chloropropane	<4.4	ug/L	14.7	4.4	2.5		08/06/18 13:04	96-12-8	
1,2-Dibromoethane (EDB)	<2.1	ug/L	6.9	2.1	2.5		08/06/18 13:04	106-93-4	
1,2-Dichlorobenzene	<1.8	ug/L	5.9	1.8	2.5		08/06/18 13:04	95-50-1	
1,2-Dichloroethane	<0.70	ug/L	2.3	0.70	2.5		08/06/18 13:04	107-06-2	
1,2-Dichloropropane	<0.71	ug/L	2.4	0.71	2.5		08/06/18 13:04	78-87-5	
1,3,5-Trimethylbenzene	<2.2	ug/L	7.3	2.2	2.5		08/06/18 13:04	108-67-8	
1,3-Dichlorobenzene	<1.6	ug/L	5.2	1.6	2.5		08/06/18 13:04	541-73-1	
1,3-Dichloropropane	<2.1	ug/L	6.9	2.1	2.5		08/06/18 13:04	142-28-9	
1,4-Dichlorobenzene	<2.4	ug/L	7.9	2.4	2.5		08/06/18 13:04	106-46-7	
2,2-Dichloropropane	<5.7	ug/L	18.9	5.7	2.5		08/06/18 13:04	594-20-7	
2-Chlorotoluene	<2.3	ug/L	7.7	2.3	2.5		08/06/18 13:04	95-49-8	
4-Chlorotoluene	<1.9	ug/L	6.3	1.9	2.5		08/06/18 13:04	106-43-4	
Benzene	<0.62	ug/L	2.1	0.62	2.5		08/06/18 13:04	71-43-2	
Bromobenzene	<0.60	ug/L	2.0	0.60	2.5		08/06/18 13:04	108-86-1	
Bromochloromethane	<0.91	ug/L	3.0	0.91	2.5		08/06/18 13:04	74-97-5	
Bromodichloromethane	<0.91	ug/L	3.0	0.91	2.5		08/06/18 13:04	75-27-4	
Bromoform	<9.9	ug/L	33.1	9.9	2.5		08/06/18 13:04	75-25-2	
Bromomethane	<2.4	ug/L	8.1	2.4	2.5		08/06/18 13:04	74-83-9	
Carbon tetrachloride	<0.41	ug/L	1.4	0.41	2.5		08/06/18 13:04	56-23-5	
Chlorobenzene	<1.8	ug/L	5.9	1.8	2.5		08/06/18 13:04	108-90-7	
Chloroethane	<3.4	ug/L	11.2	3.4	2.5		08/06/18 13:04	75-00-3	
Chloroform	<3.2	ug/L	10.6	3.2	2.5		08/06/18 13:04	67-66-3	
Chloromethane	<5.5	ug/L	18.2	5.5	2.5		08/06/18 13:04	74-87-3	
Dibromochloromethane	<6.5	ug/L	21.7	6.5	2.5		08/06/18 13:04	124-48-1	
Dibromomethane	<2.3	ug/L	7.8	2.3	2.5		08/06/18 13:04	74-95-3	
Dichlorodifluoromethane	<1.2	ug/L	4.2	1.2	2.5		08/06/18 13:04	75-71-8	
Ethylbenzene	<0.55	ug/L	1.8	0.55	2.5		08/06/18 13:04	100-41-4	
Hexachloro-1,3-butadiene	<3.0	ug/L	9.9	3.0	2.5		08/06/18 13:04	87-68-3	
Isopropylbenzene (Cumene)	<0.98	ug/L	3.3	0.98	2.5		08/06/18 13:04	98-82-8	
Methyl-tert-butyl ether	<3.1	ug/L	10.4	3.1	2.5		08/06/18 13:04	1634-04-4	
Methylene Chloride	<1.5	ug/L	4.8	1.5	2.5		08/06/18 13:04	75-09-2	
Naphthalene	<2.9	ug/L	9.8	2.9	2.5		08/06/18 13:04	91-20-3	
Styrene	<1.2	ug/L	3.9	1.2	2.5		08/06/18 13:04	100-42-5	
Tetrachloroethene	162	ug/L	2.7	0.82	2.5		08/06/18 13:04	127-18-4	
Toluene	<0.43	ug/L	1.4	0.43	2.5		08/06/18 13:04	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-1 **Lab ID: 40173494001** Collected: 08/01/18 13:30 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Trichloroethene	<0.64	ug/L	2.1	0.64	2.5		08/06/18 13:04	79-01-6	
Trichlorofluoromethane	<0.54	ug/L	1.8	0.54	2.5		08/06/18 13:04	75-69-4	
Vinyl chloride	<0.44	ug/L	1.5	0.44	2.5		08/06/18 13:04	75-01-4	
cis-1,2-Dichloroethene	<0.68	ug/L	2.3	0.68	2.5		08/06/18 13:04	156-59-2	
cis-1,3-Dichloropropene	<9.1	ug/L	30.2	9.1	2.5		08/06/18 13:04	10061-01-5	
m&p-Xylene	<1.2	ug/L	3.9	1.2	2.5		08/06/18 13:04	179601-23-1	
n-Butylbenzene	<1.8	ug/L	5.9	1.8	2.5		08/06/18 13:04	104-51-8	
n-Propylbenzene	<2.0	ug/L	6.8	2.0	2.5		08/06/18 13:04	103-65-1	
o-Xylene	<0.65	ug/L	2.2	0.65	2.5		08/06/18 13:04	95-47-6	
p-Isopropyltoluene	<2.0	ug/L	6.7	2.0	2.5		08/06/18 13:04	99-87-6	
sec-Butylbenzene	<2.1	ug/L	7.1	2.1	2.5		08/06/18 13:04	135-98-8	
tert-Butylbenzene	<0.76	ug/L	2.5	0.76	2.5		08/06/18 13:04	98-06-6	
trans-1,2-Dichloroethene	<2.7	ug/L	9.1	2.7	2.5		08/06/18 13:04	156-60-5	
trans-1,3-Dichloropropene	<10.9	ug/L	36.4	10.9	2.5		08/06/18 13:04	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	89	%	70-130		2.5		08/06/18 13:04	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		2.5		08/06/18 13:04	1868-53-7	
Toluene-d8 (S)	99	%	70-130		2.5		08/06/18 13:04	2037-26-5	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-2 **Lab ID: 40173494002** Collected: 08/01/18 11:20 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.27	ug/L	0.90	0.27	1		08/06/18 13:25	630-20-6	
1,1,1-Trichloroethane	<0.24	ug/L	0.82	0.24	1		08/06/18 13:25	71-55-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	0.92	0.28	1		08/06/18 13:25	79-34-5	
1,1,2-Trichloroethane	<0.55	ug/L	1.8	0.55	1		08/06/18 13:25	79-00-5	
1,1-Dichloroethane	<0.27	ug/L	0.91	0.27	1		08/06/18 13:25	75-34-3	
1,1-Dichloroethene	<0.24	ug/L	0.82	0.24	1		08/06/18 13:25	75-35-4	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		08/06/18 13:25	563-58-6	
1,2,3-Trichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 13:25	87-61-6	
1,2,3-Trichloropropane	<0.59	ug/L	2.0	0.59	1		08/06/18 13:25	96-18-4	
1,2,4-Trichlorobenzene	<0.95	ug/L	3.2	0.95	1		08/06/18 13:25	120-82-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/06/18 13:25	95-63-6	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		08/06/18 13:25	96-12-8	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		08/06/18 13:25	106-93-4	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 13:25	95-50-1	
1,2-Dichloroethane	<0.28	ug/L	0.93	0.28	1		08/06/18 13:25	107-06-2	
1,2-Dichloropropane	<0.28	ug/L	0.94	0.28	1		08/06/18 13:25	78-87-5	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/06/18 13:25	108-67-8	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 13:25	541-73-1	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		08/06/18 13:25	142-28-9	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		08/06/18 13:25	106-46-7	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		08/06/18 13:25	594-20-7	
2-Chlorotoluene	<0.93	ug/L	3.1	0.93	1		08/06/18 13:25	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		08/06/18 13:25	106-43-4	
Benzene	<0.25	ug/L	0.82	0.25	1		08/06/18 13:25	71-43-2	
Bromobenzene	<0.24	ug/L	0.80	0.24	1		08/06/18 13:25	108-86-1	
Bromochloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 13:25	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 13:25	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		08/06/18 13:25	75-25-2	
Bromomethane	<0.97	ug/L	3.2	0.97	1		08/06/18 13:25	74-83-9	
Carbon tetrachloride	<0.17	ug/L	0.55	0.17	1		08/06/18 13:25	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 13:25	108-90-7	
Chloroethane	<1.3	ug/L	4.5	1.3	1		08/06/18 13:25	75-00-3	
Chloroform	<1.3	ug/L	4.2	1.3	1		08/06/18 13:25	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		08/06/18 13:25	74-87-3	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		08/06/18 13:25	124-48-1	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		08/06/18 13:25	74-95-3	
Dichlorodifluoromethane	<0.50	ug/L	1.7	0.50	1		08/06/18 13:25	75-71-8	
Ethylbenzene	<0.22	ug/L	0.73	0.22	1		08/06/18 13:25	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	3.9	1.2	1		08/06/18 13:25	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	1.3	0.39	1		08/06/18 13:25	98-82-8	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/06/18 13:25	1634-04-4	
Methylene Chloride	1.0J	ug/L	1.9	0.58	1		08/06/18 13:25	75-09-2	
Naphthalene	<1.2	ug/L	3.9	1.2	1		08/06/18 13:25	91-20-3	
Styrene	<0.47	ug/L	1.6	0.47	1		08/06/18 13:25	100-42-5	
Tetrachloroethene	2.5	ug/L	1.1	0.33	1		08/06/18 13:25	127-18-4	
Toluene	<0.17	ug/L	0.57	0.17	1		08/06/18 13:25	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-2 **Lab ID: 40173494002** Collected: 08/01/18 11:20 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Trichloroethene	<0.26	ug/L	0.85	0.26	1		08/06/18 13:25	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	0.72	0.21	1		08/06/18 13:25	75-69-4	
Vinyl chloride	<0.17	ug/L	0.58	0.17	1		08/06/18 13:25	75-01-4	
cis-1,2-Dichloroethene	<0.27	ug/L	0.90	0.27	1		08/06/18 13:25	156-59-2	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		08/06/18 13:25	10061-01-5	
m&p-Xylene	<0.47	ug/L	1.6	0.47	1		08/06/18 13:25	179601-23-1	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 13:25	104-51-8	
n-Propylbenzene	<0.81	ug/L	2.7	0.81	1		08/06/18 13:25	103-65-1	
o-Xylene	<0.26	ug/L	0.87	0.26	1		08/06/18 13:25	95-47-6	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		08/06/18 13:25	99-87-6	
sec-Butylbenzene	<0.85	ug/L	2.8	0.85	1		08/06/18 13:25	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		08/06/18 13:25	98-06-6	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		08/06/18 13:25	156-60-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		08/06/18 13:25	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-130		1		08/06/18 13:25	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		08/06/18 13:25	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		08/06/18 13:25	2037-26-5	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-3 **Lab ID: 40173494003** Collected: 08/01/18 11:45 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.27	ug/L	0.90	0.27	1		08/06/18 13:47	630-20-6	
1,1,1-Trichloroethane	<0.24	ug/L	0.82	0.24	1		08/06/18 13:47	71-55-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	0.92	0.28	1		08/06/18 13:47	79-34-5	
1,1,2-Trichloroethane	<0.55	ug/L	1.8	0.55	1		08/06/18 13:47	79-00-5	
1,1-Dichloroethane	<0.27	ug/L	0.91	0.27	1		08/06/18 13:47	75-34-3	
1,1-Dichloroethene	<0.24	ug/L	0.82	0.24	1		08/06/18 13:47	75-35-4	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		08/06/18 13:47	563-58-6	
1,2,3-Trichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 13:47	87-61-6	
1,2,3-Trichloropropane	<0.59	ug/L	2.0	0.59	1		08/06/18 13:47	96-18-4	
1,2,4-Trichlorobenzene	<0.95	ug/L	3.2	0.95	1		08/06/18 13:47	120-82-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/06/18 13:47	95-63-6	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		08/06/18 13:47	96-12-8	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		08/06/18 13:47	106-93-4	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 13:47	95-50-1	
1,2-Dichloroethane	<0.28	ug/L	0.93	0.28	1		08/06/18 13:47	107-06-2	
1,2-Dichloropropane	<0.28	ug/L	0.94	0.28	1		08/06/18 13:47	78-87-5	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/06/18 13:47	108-67-8	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 13:47	541-73-1	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		08/06/18 13:47	142-28-9	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		08/06/18 13:47	106-46-7	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		08/06/18 13:47	594-20-7	
2-Chlorotoluene	<0.93	ug/L	3.1	0.93	1		08/06/18 13:47	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		08/06/18 13:47	106-43-4	
Benzene	<0.25	ug/L	0.82	0.25	1		08/06/18 13:47	71-43-2	
Bromobenzene	<0.24	ug/L	0.80	0.24	1		08/06/18 13:47	108-86-1	
Bromochloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 13:47	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 13:47	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		08/06/18 13:47	75-25-2	
Bromomethane	<0.97	ug/L	3.2	0.97	1		08/06/18 13:47	74-83-9	
Carbon tetrachloride	<0.17	ug/L	0.55	0.17	1		08/06/18 13:47	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 13:47	108-90-7	
Chloroethane	<1.3	ug/L	4.5	1.3	1		08/06/18 13:47	75-00-3	
Chloroform	<1.3	ug/L	4.2	1.3	1		08/06/18 13:47	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		08/06/18 13:47	74-87-3	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		08/06/18 13:47	124-48-1	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		08/06/18 13:47	74-95-3	
Dichlorodifluoromethane	<0.50	ug/L	1.7	0.50	1		08/06/18 13:47	75-71-8	
Ethylbenzene	<0.22	ug/L	0.73	0.22	1		08/06/18 13:47	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	3.9	1.2	1		08/06/18 13:47	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	1.3	0.39	1		08/06/18 13:47	98-82-8	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/06/18 13:47	1634-04-4	
Methylene Chloride	<0.58	ug/L	1.9	0.58	1		08/06/18 13:47	75-09-2	
Naphthalene	<1.2	ug/L	3.9	1.2	1		08/06/18 13:47	91-20-3	
Styrene	<0.47	ug/L	1.6	0.47	1		08/06/18 13:47	100-42-5	
Tetrachloroethene	29.1	ug/L	1.1	0.33	1		08/06/18 13:47	127-18-4	
Toluene	<0.17	ug/L	0.57	0.17	1		08/06/18 13:47	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-3 **Lab ID: 40173494003** Collected: 08/01/18 11:45 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Trichloroethene	<0.26	ug/L	0.85	0.26	1		08/06/18 13:47	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	0.72	0.21	1		08/06/18 13:47	75-69-4	
Vinyl chloride	<0.17	ug/L	0.58	0.17	1		08/06/18 13:47	75-01-4	
cis-1,2-Dichloroethene	<0.27	ug/L	0.90	0.27	1		08/06/18 13:47	156-59-2	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		08/06/18 13:47	10061-01-5	
m&p-Xylene	<0.47	ug/L	1.6	0.47	1		08/06/18 13:47	179601-23-1	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 13:47	104-51-8	
n-Propylbenzene	<0.81	ug/L	2.7	0.81	1		08/06/18 13:47	103-65-1	
o-Xylene	<0.26	ug/L	0.87	0.26	1		08/06/18 13:47	95-47-6	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		08/06/18 13:47	99-87-6	
sec-Butylbenzene	<0.85	ug/L	2.8	0.85	1		08/06/18 13:47	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		08/06/18 13:47	98-06-6	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		08/06/18 13:47	156-60-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		08/06/18 13:47	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-130		1		08/06/18 13:47	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		08/06/18 13:47	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		08/06/18 13:47	2037-26-5	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-4 **Lab ID: 40173494004** Collected: 08/01/18 13:15 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.27	ug/L	0.90	0.27	1		08/06/18 14:08	630-20-6	
1,1,1-Trichloroethane	<0.24	ug/L	0.82	0.24	1		08/06/18 14:08	71-55-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	0.92	0.28	1		08/06/18 14:08	79-34-5	
1,1,2-Trichloroethane	<0.55	ug/L	1.8	0.55	1		08/06/18 14:08	79-00-5	
1,1-Dichloroethane	<0.27	ug/L	0.91	0.27	1		08/06/18 14:08	75-34-3	
1,1-Dichloroethene	<0.24	ug/L	0.82	0.24	1		08/06/18 14:08	75-35-4	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		08/06/18 14:08	563-58-6	
1,2,3-Trichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 14:08	87-61-6	
1,2,3-Trichloropropane	<0.59	ug/L	2.0	0.59	1		08/06/18 14:08	96-18-4	
1,2,4-Trichlorobenzene	<0.95	ug/L	3.2	0.95	1		08/06/18 14:08	120-82-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/06/18 14:08	95-63-6	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		08/06/18 14:08	96-12-8	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		08/06/18 14:08	106-93-4	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 14:08	95-50-1	
1,2-Dichloroethane	<0.28	ug/L	0.93	0.28	1		08/06/18 14:08	107-06-2	
1,2-Dichloropropane	<0.28	ug/L	0.94	0.28	1		08/06/18 14:08	78-87-5	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/06/18 14:08	108-67-8	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 14:08	541-73-1	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		08/06/18 14:08	142-28-9	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		08/06/18 14:08	106-46-7	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		08/06/18 14:08	594-20-7	
2-Chlorotoluene	<0.93	ug/L	3.1	0.93	1		08/06/18 14:08	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		08/06/18 14:08	106-43-4	
Benzene	<0.25	ug/L	0.82	0.25	1		08/06/18 14:08	71-43-2	
Bromobenzene	<0.24	ug/L	0.80	0.24	1		08/06/18 14:08	108-86-1	
Bromochloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 14:08	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 14:08	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		08/06/18 14:08	75-25-2	
Bromomethane	<0.97	ug/L	3.2	0.97	1		08/06/18 14:08	74-83-9	
Carbon tetrachloride	<0.17	ug/L	0.55	0.17	1		08/06/18 14:08	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 14:08	108-90-7	
Chloroethane	<1.3	ug/L	4.5	1.3	1		08/06/18 14:08	75-00-3	
Chloroform	<1.3	ug/L	4.2	1.3	1		08/06/18 14:08	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		08/06/18 14:08	74-87-3	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		08/06/18 14:08	124-48-1	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		08/06/18 14:08	74-95-3	
Dichlorodifluoromethane	<0.50	ug/L	1.7	0.50	1		08/06/18 14:08	75-71-8	
Ethylbenzene	<0.22	ug/L	0.73	0.22	1		08/06/18 14:08	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	3.9	1.2	1		08/06/18 14:08	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	1.3	0.39	1		08/06/18 14:08	98-82-8	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/06/18 14:08	1634-04-4	
Methylene Chloride	0.75J	ug/L	1.9	0.58	1		08/06/18 14:08	75-09-2	
Naphthalene	<1.2	ug/L	3.9	1.2	1		08/06/18 14:08	91-20-3	
Styrene	<0.47	ug/L	1.6	0.47	1		08/06/18 14:08	100-42-5	
Tetrachloroethene	1.3	ug/L	1.1	0.33	1		08/06/18 14:08	127-18-4	
Toluene	<0.17	ug/L	0.57	0.17	1		08/06/18 14:08	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-4 **Lab ID: 40173494004** Collected: 08/01/18 13:15 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Trichloroethene	<0.26	ug/L	0.85	0.26	1		08/06/18 14:08	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	0.72	0.21	1		08/06/18 14:08	75-69-4	
Vinyl chloride	<0.17	ug/L	0.58	0.17	1		08/06/18 14:08	75-01-4	
cis-1,2-Dichloroethene	<0.27	ug/L	0.90	0.27	1		08/06/18 14:08	156-59-2	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		08/06/18 14:08	10061-01-5	
m&p-Xylene	<0.47	ug/L	1.6	0.47	1		08/06/18 14:08	179601-23-1	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 14:08	104-51-8	
n-Propylbenzene	<0.81	ug/L	2.7	0.81	1		08/06/18 14:08	103-65-1	
o-Xylene	<0.26	ug/L	0.87	0.26	1		08/06/18 14:08	95-47-6	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		08/06/18 14:08	99-87-6	
sec-Butylbenzene	<0.85	ug/L	2.8	0.85	1		08/06/18 14:08	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		08/06/18 14:08	98-06-6	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		08/06/18 14:08	156-60-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		08/06/18 14:08	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		08/06/18 14:08	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		08/06/18 14:08	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		08/06/18 14:08	2037-26-5	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-6 **Lab ID: 40173494005** Collected: 08/01/18 12:15 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	<0.27	ug/L	0.90	0.27	1		08/06/18 14:30	630-20-6	
1,1,1-Trichloroethane	<0.24	ug/L	0.82	0.24	1		08/06/18 14:30	71-55-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	0.92	0.28	1		08/06/18 14:30	79-34-5	
1,1,2-Trichloroethane	<0.55	ug/L	1.8	0.55	1		08/06/18 14:30	79-00-5	
1,1-Dichloroethane	<0.27	ug/L	0.91	0.27	1		08/06/18 14:30	75-34-3	
1,1-Dichloroethene	<0.24	ug/L	0.82	0.24	1		08/06/18 14:30	75-35-4	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		08/06/18 14:30	563-58-6	
1,2,3-Trichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 14:30	87-61-6	
1,2,3-Trichloropropane	<0.59	ug/L	2.0	0.59	1		08/06/18 14:30	96-18-4	
1,2,4-Trichlorobenzene	<0.95	ug/L	3.2	0.95	1		08/06/18 14:30	120-82-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/06/18 14:30	95-63-6	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		08/06/18 14:30	96-12-8	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		08/06/18 14:30	106-93-4	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 14:30	95-50-1	
1,2-Dichloroethane	<0.28	ug/L	0.93	0.28	1		08/06/18 14:30	107-06-2	
1,2-Dichloropropane	<0.28	ug/L	0.94	0.28	1		08/06/18 14:30	78-87-5	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/06/18 14:30	108-67-8	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 14:30	541-73-1	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		08/06/18 14:30	142-28-9	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		08/06/18 14:30	106-46-7	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		08/06/18 14:30	594-20-7	
2-Chlorotoluene	<0.93	ug/L	3.1	0.93	1		08/06/18 14:30	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		08/06/18 14:30	106-43-4	
Benzene	<0.25	ug/L	0.82	0.25	1		08/06/18 14:30	71-43-2	
Bromobenzene	<0.24	ug/L	0.80	0.24	1		08/06/18 14:30	108-86-1	
Bromochloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 14:30	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 14:30	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		08/06/18 14:30	75-25-2	
Bromomethane	<0.97	ug/L	3.2	0.97	1		08/06/18 14:30	74-83-9	
Carbon tetrachloride	<0.17	ug/L	0.55	0.17	1		08/06/18 14:30	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 14:30	108-90-7	
Chloroethane	<1.3	ug/L	4.5	1.3	1		08/06/18 14:30	75-00-3	
Chloroform	<1.3	ug/L	4.2	1.3	1		08/06/18 14:30	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		08/06/18 14:30	74-87-3	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		08/06/18 14:30	124-48-1	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		08/06/18 14:30	74-95-3	
Dichlorodifluoromethane	<0.50	ug/L	1.7	0.50	1		08/06/18 14:30	75-71-8	
Ethylbenzene	<0.22	ug/L	0.73	0.22	1		08/06/18 14:30	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	3.9	1.2	1		08/06/18 14:30	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	1.3	0.39	1		08/06/18 14:30	98-82-8	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/06/18 14:30	1634-04-4	
Methylene Chloride	1.4J	ug/L	1.9	0.58	1		08/06/18 14:30	75-09-2	
Naphthalene	<1.2	ug/L	3.9	1.2	1		08/06/18 14:30	91-20-3	
Styrene	<0.47	ug/L	1.6	0.47	1		08/06/18 14:30	100-42-5	
Tetrachloroethene	2.2	ug/L	1.1	0.33	1		08/06/18 14:30	127-18-4	
Toluene	<0.17	ug/L	0.57	0.17	1		08/06/18 14:30	108-88-3	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-6 **Lab ID: 40173494005** Collected: 08/01/18 12:15 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Trichloroethene	<0.26	ug/L	0.85	0.26	1		08/06/18 14:30	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	0.72	0.21	1		08/06/18 14:30	75-69-4	
Vinyl chloride	<0.17	ug/L	0.58	0.17	1		08/06/18 14:30	75-01-4	
cis-1,2-Dichloroethene	<0.27	ug/L	0.90	0.27	1		08/06/18 14:30	156-59-2	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		08/06/18 14:30	10061-01-5	
m&p-Xylene	<0.47	ug/L	1.6	0.47	1		08/06/18 14:30	179601-23-1	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 14:30	104-51-8	
n-Propylbenzene	<0.81	ug/L	2.7	0.81	1		08/06/18 14:30	103-65-1	
o-Xylene	<0.26	ug/L	0.87	0.26	1		08/06/18 14:30	95-47-6	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		08/06/18 14:30	99-87-6	
sec-Butylbenzene	<0.85	ug/L	2.8	0.85	1		08/06/18 14:30	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		08/06/18 14:30	98-06-6	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		08/06/18 14:30	156-60-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		08/06/18 14:30	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-130		1		08/06/18 14:30	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		08/06/18 14:30	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		08/06/18 14:30	2037-26-5	

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-6 DUP **Lab ID: 40173494006** Collected: 08/01/18 12:15 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.27	ug/L	0.90	0.27	1		08/06/18 14:51	630-20-6	
1,1,1-Trichloroethane	<0.24	ug/L	0.82	0.24	1		08/06/18 14:51	71-55-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	0.92	0.28	1		08/06/18 14:51	79-34-5	
1,1,2-Trichloroethane	<0.55	ug/L	1.8	0.55	1		08/06/18 14:51	79-00-5	
1,1-Dichloroethane	<0.27	ug/L	0.91	0.27	1		08/06/18 14:51	75-34-3	
1,1-Dichloroethene	<0.24	ug/L	0.82	0.24	1		08/06/18 14:51	75-35-4	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		08/06/18 14:51	563-58-6	
1,2,3-Trichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 14:51	87-61-6	
1,2,3-Trichloropropane	<0.59	ug/L	2.0	0.59	1		08/06/18 14:51	96-18-4	
1,2,4-Trichlorobenzene	<0.95	ug/L	3.2	0.95	1		08/06/18 14:51	120-82-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/06/18 14:51	95-63-6	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		08/06/18 14:51	96-12-8	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		08/06/18 14:51	106-93-4	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 14:51	95-50-1	
1,2-Dichloroethane	<0.28	ug/L	0.93	0.28	1		08/06/18 14:51	107-06-2	
1,2-Dichloropropane	<0.28	ug/L	0.94	0.28	1		08/06/18 14:51	78-87-5	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/06/18 14:51	108-67-8	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 14:51	541-73-1	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		08/06/18 14:51	142-28-9	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		08/06/18 14:51	106-46-7	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		08/06/18 14:51	594-20-7	
2-Chlorotoluene	<0.93	ug/L	3.1	0.93	1		08/06/18 14:51	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		08/06/18 14:51	106-43-4	
Benzene	<0.25	ug/L	0.82	0.25	1		08/06/18 14:51	71-43-2	
Bromobenzene	<0.24	ug/L	0.80	0.24	1		08/06/18 14:51	108-86-1	
Bromochloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 14:51	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 14:51	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		08/06/18 14:51	75-25-2	
Bromomethane	<0.97	ug/L	3.2	0.97	1		08/06/18 14:51	74-83-9	
Carbon tetrachloride	<0.17	ug/L	0.55	0.17	1		08/06/18 14:51	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 14:51	108-90-7	
Chloroethane	<1.3	ug/L	4.5	1.3	1		08/06/18 14:51	75-00-3	
Chloroform	<1.3	ug/L	4.2	1.3	1		08/06/18 14:51	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		08/06/18 14:51	74-87-3	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		08/06/18 14:51	124-48-1	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		08/06/18 14:51	74-95-3	
Dichlorodifluoromethane	<0.50	ug/L	1.7	0.50	1		08/06/18 14:51	75-71-8	
Ethylbenzene	<0.22	ug/L	0.73	0.22	1		08/06/18 14:51	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	3.9	1.2	1		08/06/18 14:51	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	1.3	0.39	1		08/06/18 14:51	98-82-8	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/06/18 14:51	1634-04-4	
Methylene Chloride	0.72J	ug/L	1.9	0.58	1		08/06/18 14:51	75-09-2	
Naphthalene	<1.2	ug/L	3.9	1.2	1		08/06/18 14:51	91-20-3	
Styrene	<0.47	ug/L	1.6	0.47	1		08/06/18 14:51	100-42-5	
Tetrachloroethene	2.1	ug/L	1.1	0.33	1		08/06/18 14:51	127-18-4	
Toluene	<0.17	ug/L	0.57	0.17	1		08/06/18 14:51	108-88-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: MW-6 DUP **Lab ID: 40173494006** Collected: 08/01/18 12:15 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Trichloroethene	<0.26	ug/L	0.85	0.26	1		08/06/18 14:51	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	0.72	0.21	1		08/06/18 14:51	75-69-4	
Vinyl chloride	<0.17	ug/L	0.58	0.17	1		08/06/18 14:51	75-01-4	
cis-1,2-Dichloroethene	<0.27	ug/L	0.90	0.27	1		08/06/18 14:51	156-59-2	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		08/06/18 14:51	10061-01-5	
m&p-Xylene	<0.47	ug/L	1.6	0.47	1		08/06/18 14:51	179601-23-1	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 14:51	104-51-8	
n-Propylbenzene	<0.81	ug/L	2.7	0.81	1		08/06/18 14:51	103-65-1	
o-Xylene	<0.26	ug/L	0.87	0.26	1		08/06/18 14:51	95-47-6	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		08/06/18 14:51	99-87-6	
sec-Butylbenzene	<0.85	ug/L	2.8	0.85	1		08/06/18 14:51	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		08/06/18 14:51	98-06-6	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		08/06/18 14:51	156-60-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		08/06/18 14:51	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		08/06/18 14:51	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		08/06/18 14:51	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		08/06/18 14:51	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: TRIP BLANK **Lab ID: 40173494007** Collected: 08/01/18 00:00 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.27	ug/L	0.90	0.27	1		08/06/18 10:55	630-20-6	
1,1,1-Trichloroethane	<0.24	ug/L	0.82	0.24	1		08/06/18 10:55	71-55-6	
1,1,2,2-Tetrachloroethane	<0.28	ug/L	0.92	0.28	1		08/06/18 10:55	79-34-5	
1,1,2-Trichloroethane	<0.55	ug/L	1.8	0.55	1		08/06/18 10:55	79-00-5	
1,1-Dichloroethane	<0.27	ug/L	0.91	0.27	1		08/06/18 10:55	75-34-3	
1,1-Dichloroethene	<0.24	ug/L	0.82	0.24	1		08/06/18 10:55	75-35-4	
1,1-Dichloropropene	<0.54	ug/L	1.8	0.54	1		08/06/18 10:55	563-58-6	
1,2,3-Trichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 10:55	87-61-6	
1,2,3-Trichloropropane	<0.59	ug/L	2.0	0.59	1		08/06/18 10:55	96-18-4	
1,2,4-Trichlorobenzene	<0.95	ug/L	3.2	0.95	1		08/06/18 10:55	120-82-1	
1,2,4-Trimethylbenzene	<0.84	ug/L	2.8	0.84	1		08/06/18 10:55	95-63-6	
1,2-Dibromo-3-chloropropane	<1.8	ug/L	5.9	1.8	1		08/06/18 10:55	96-12-8	
1,2-Dibromoethane (EDB)	<0.83	ug/L	2.8	0.83	1		08/06/18 10:55	106-93-4	
1,2-Dichlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 10:55	95-50-1	
1,2-Dichloroethane	<0.28	ug/L	0.93	0.28	1		08/06/18 10:55	107-06-2	
1,2-Dichloropropane	<0.28	ug/L	0.94	0.28	1		08/06/18 10:55	78-87-5	
1,3,5-Trimethylbenzene	<0.87	ug/L	2.9	0.87	1		08/06/18 10:55	108-67-8	
1,3-Dichlorobenzene	<0.63	ug/L	2.1	0.63	1		08/06/18 10:55	541-73-1	
1,3-Dichloropropane	<0.83	ug/L	2.8	0.83	1		08/06/18 10:55	142-28-9	
1,4-Dichlorobenzene	<0.94	ug/L	3.1	0.94	1		08/06/18 10:55	106-46-7	
2,2-Dichloropropane	<2.3	ug/L	7.6	2.3	1		08/06/18 10:55	594-20-7	
2-Chlorotoluene	<0.93	ug/L	3.1	0.93	1		08/06/18 10:55	95-49-8	
4-Chlorotoluene	<0.76	ug/L	2.5	0.76	1		08/06/18 10:55	106-43-4	
Benzene	<0.25	ug/L	0.82	0.25	1		08/06/18 10:55	71-43-2	
Bromobenzene	<0.24	ug/L	0.80	0.24	1		08/06/18 10:55	108-86-1	
Bromochloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 10:55	74-97-5	
Bromodichloromethane	<0.36	ug/L	1.2	0.36	1		08/06/18 10:55	75-27-4	
Bromoform	<4.0	ug/L	13.2	4.0	1		08/06/18 10:55	75-25-2	
Bromomethane	<0.97	ug/L	3.2	0.97	1		08/06/18 10:55	74-83-9	
Carbon tetrachloride	<0.17	ug/L	0.55	0.17	1		08/06/18 10:55	56-23-5	
Chlorobenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 10:55	108-90-7	
Chloroethane	<1.3	ug/L	4.5	1.3	1		08/06/18 10:55	75-00-3	
Chloroform	<1.3	ug/L	4.2	1.3	1		08/06/18 10:55	67-66-3	
Chloromethane	<2.2	ug/L	7.3	2.2	1		08/06/18 10:55	74-87-3	
Dibromochloromethane	<2.6	ug/L	8.7	2.6	1		08/06/18 10:55	124-48-1	
Dibromomethane	<0.94	ug/L	3.1	0.94	1		08/06/18 10:55	74-95-3	
Dichlorodifluoromethane	<0.50	ug/L	1.7	0.50	1		08/06/18 10:55	75-71-8	
Ethylbenzene	<0.22	ug/L	0.73	0.22	1		08/06/18 10:55	100-41-4	
Hexachloro-1,3-butadiene	<1.2	ug/L	3.9	1.2	1		08/06/18 10:55	87-68-3	
Isopropylbenzene (Cumene)	<0.39	ug/L	1.3	0.39	1		08/06/18 10:55	98-82-8	
Methyl-tert-butyl ether	<1.2	ug/L	4.2	1.2	1		08/06/18 10:55	1634-04-4	
Methylene Chloride	<0.58	ug/L	1.9	0.58	1		08/06/18 10:55	75-09-2	
Naphthalene	<1.2	ug/L	3.9	1.2	1		08/06/18 10:55	91-20-3	
Styrene	<0.47	ug/L	1.6	0.47	1		08/06/18 10:55	100-42-5	
Tetrachloroethene	<0.33	ug/L	1.1	0.33	1		08/06/18 10:55	127-18-4	
Toluene	<0.17	ug/L	0.57	0.17	1		08/06/18 10:55	108-88-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Sample: TRIP BLANK **Lab ID: 40173494007** Collected: 08/01/18 00:00 Received: 08/03/18 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Trichloroethene	<0.26	ug/L	0.85	0.26	1		08/06/18 10:55	79-01-6	
Trichlorofluoromethane	<0.21	ug/L	0.72	0.21	1		08/06/18 10:55	75-69-4	
Vinyl chloride	<0.17	ug/L	0.58	0.17	1		08/06/18 10:55	75-01-4	
cis-1,2-Dichloroethene	<0.27	ug/L	0.90	0.27	1		08/06/18 10:55	156-59-2	
cis-1,3-Dichloropropene	<3.6	ug/L	12.1	3.6	1		08/06/18 10:55	10061-01-5	
m&p-Xylene	<0.47	ug/L	1.6	0.47	1		08/06/18 10:55	179601-23-1	
n-Butylbenzene	<0.71	ug/L	2.4	0.71	1		08/06/18 10:55	104-51-8	
n-Propylbenzene	<0.81	ug/L	2.7	0.81	1		08/06/18 10:55	103-65-1	
o-Xylene	<0.26	ug/L	0.87	0.26	1		08/06/18 10:55	95-47-6	
p-Isopropyltoluene	<0.80	ug/L	2.7	0.80	1		08/06/18 10:55	99-87-6	
sec-Butylbenzene	<0.85	ug/L	2.8	0.85	1		08/06/18 10:55	135-98-8	
tert-Butylbenzene	<0.30	ug/L	1.0	0.30	1		08/06/18 10:55	98-06-6	
trans-1,2-Dichloroethene	<1.1	ug/L	3.6	1.1	1		08/06/18 10:55	156-60-5	
trans-1,3-Dichloropropene	<4.4	ug/L	14.6	4.4	1		08/06/18 10:55	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-130		1		08/06/18 10:55	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		08/06/18 10:55	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		08/06/18 10:55	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 47358.003 KOELLER ONE
Pace Project No.: 40173494

QC Batch: 296374 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40173494001, 40173494002, 40173494003, 40173494004, 40173494005, 40173494006, 40173494007

METHOD BLANK: 1731753 Matrix: Water
Associated Lab Samples: 40173494001, 40173494002, 40173494003, 40173494004, 40173494005, 40173494006, 40173494007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	0.90	08/06/18 08:02	
1,1,1-Trichloroethane	ug/L	<0.24	0.82	08/06/18 08:02	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	0.92	08/06/18 08:02	
1,1,2-Trichloroethane	ug/L	<0.55	1.8	08/06/18 08:02	
1,1-Dichloroethane	ug/L	<0.27	0.91	08/06/18 08:02	
1,1-Dichloroethene	ug/L	<0.24	0.82	08/06/18 08:02	
1,1-Dichloropropene	ug/L	<0.54	1.8	08/06/18 08:02	
1,2,3-Trichlorobenzene	ug/L	<0.63	2.1	08/06/18 08:02	
1,2,3-Trichloropropane	ug/L	<0.59	2.0	08/06/18 08:02	
1,2,4-Trichlorobenzene	ug/L	<0.95	3.2	08/06/18 08:02	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	08/06/18 08:02	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	08/06/18 08:02	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	08/06/18 08:02	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	08/06/18 08:02	
1,2-Dichloroethane	ug/L	<0.28	0.93	08/06/18 08:02	
1,2-Dichloropropane	ug/L	<0.28	0.94	08/06/18 08:02	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	08/06/18 08:02	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	08/06/18 08:02	
1,3-Dichloropropane	ug/L	<0.83	2.8	08/06/18 08:02	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	08/06/18 08:02	
2,2-Dichloropropane	ug/L	<2.3	7.6	08/06/18 08:02	
2-Chlorotoluene	ug/L	<0.93	3.1	08/06/18 08:02	
4-Chlorotoluene	ug/L	<0.76	2.5	08/06/18 08:02	
Benzene	ug/L	<0.25	0.82	08/06/18 08:02	
Bromobenzene	ug/L	<0.24	0.80	08/06/18 08:02	
Bromochloromethane	ug/L	<0.36	1.2	08/06/18 08:02	
Bromodichloromethane	ug/L	<0.36	1.2	08/06/18 08:02	
Bromoform	ug/L	<4.0	13.2	08/06/18 08:02	
Bromomethane	ug/L	<0.97	3.2	08/06/18 08:02	
Carbon tetrachloride	ug/L	<0.17	0.55	08/06/18 08:02	
Chlorobenzene	ug/L	<0.71	2.4	08/06/18 08:02	
Chloroethane	ug/L	<1.3	4.5	08/06/18 08:02	
Chloroform	ug/L	<1.3	4.2	08/06/18 08:02	
Chloromethane	ug/L	<2.2	7.3	08/06/18 08:02	
cis-1,2-Dichloroethene	ug/L	<0.27	0.90	08/06/18 08:02	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	08/06/18 08:02	
Dibromochloromethane	ug/L	<2.6	8.7	08/06/18 08:02	
Dibromomethane	ug/L	<0.94	3.1	08/06/18 08:02	
Dichlorodifluoromethane	ug/L	<0.50	1.7	08/06/18 08:02	
Ethylbenzene	ug/L	<0.22	0.73	08/06/18 08:02	
Hexachloro-1,3-butadiene	ug/L	<1.2	3.9	08/06/18 08:02	

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QUALITY CONTROL DATA

Project: 47358.003 KOELLER ONE
Pace Project No.: 40173494

METHOD BLANK: 1731753 Matrix: Water
Associated Lab Samples: 40173494001, 40173494002, 40173494003, 40173494004, 40173494005, 40173494006, 40173494007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.39	1.3	08/06/18 08:02	
m&p-Xylene	ug/L	<0.47	1.6	08/06/18 08:02	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	08/06/18 08:02	
Methylene Chloride	ug/L	<0.58	1.9	08/06/18 08:02	
n-Butylbenzene	ug/L	<0.71	2.4	08/06/18 08:02	
n-Propylbenzene	ug/L	<0.81	2.7	08/06/18 08:02	
Naphthalene	ug/L	<1.2	3.9	08/06/18 08:02	
o-Xylene	ug/L	<0.26	0.87	08/06/18 08:02	
p-Isopropyltoluene	ug/L	<0.80	2.7	08/06/18 08:02	
sec-Butylbenzene	ug/L	<0.85	2.8	08/06/18 08:02	
Styrene	ug/L	<0.47	1.6	08/06/18 08:02	
tert-Butylbenzene	ug/L	<0.30	1.0	08/06/18 08:02	
Tetrachloroethene	ug/L	<0.33	1.1	08/06/18 08:02	
Toluene	ug/L	<0.17	0.57	08/06/18 08:02	
trans-1,2-Dichloroethene	ug/L	<1.1	3.6	08/06/18 08:02	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	08/06/18 08:02	
Trichloroethene	ug/L	<0.26	0.85	08/06/18 08:02	
Trichlorofluoromethane	ug/L	<0.21	0.72	08/06/18 08:02	
Vinyl chloride	ug/L	<0.17	0.58	08/06/18 08:02	
4-Bromofluorobenzene (S)	%	91	70-130	08/06/18 08:02	
Dibromofluoromethane (S)	%	98	70-130	08/06/18 08:02	
Toluene-d8 (S)	%	102	70-130	08/06/18 08:02	

LABORATORY CONTROL SAMPLE: 1731754

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.3	107	70-133	
1,1,2,2-Tetrachloroethane	ug/L	20	21.3	106	67-130	
1,1,2-Trichloroethane	ug/L	20	22.1	110	70-130	
1,1-Dichloroethane	ug/L	20	20.1	100	70-134	
1,1-Dichloroethene	ug/L	20	21.0	105	75-132	
1,2,4-Trichlorobenzene	ug/L	20	20.1	100	68-130	
1,2-Dibromo-3-chloropropane	ug/L	20	19.1	96	60-126	
1,2-Dibromoethane (EDB)	ug/L	20	20.6	103	70-130	
1,2-Dichlorobenzene	ug/L	20	20.5	103	70-130	
1,2-Dichloroethane	ug/L	20	21.2	106	73-134	
1,2-Dichloropropane	ug/L	20	22.5	113	79-128	
1,3-Dichlorobenzene	ug/L	20	20.5	102	70-130	
1,4-Dichlorobenzene	ug/L	20	21.1	105	70-130	
Benzene	ug/L	20	21.1	105	69-137	
Bromodichloromethane	ug/L	20	19.9	100	70-130	
Bromoform	ug/L	20	21.5	107	64-133	
Bromomethane	ug/L	20	11.9	60	29-123	
Carbon tetrachloride	ug/L	20	20.9	105	73-142	

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QUALITY CONTROL DATA

Project: 47358.003 KOELLER ONE
Pace Project No.: 40173494

LABORATORY CONTROL SAMPLE: 1731754

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorobenzene	ug/L	20	21.5	107	70-130	
Chloroethane	ug/L	20	18.9	95	59-133	
Chloroform	ug/L	20	21.3	107	80-129	
Chloromethane	ug/L	20	18.5	92	27-125	
cis-1,2-Dichloroethene	ug/L	20	20.6	103	70-134	
cis-1,3-Dichloropropene	ug/L	20	20.1	100	70-130	
Dibromochloromethane	ug/L	20	19.8	99	70-130	
Dichlorodifluoromethane	ug/L	20	18.8	94	12-127	
Ethylbenzene	ug/L	20	22.1	111	86-127	
Isopropylbenzene (Cumene)	ug/L	20	22.1	110	70-130	
m&p-Xylene	ug/L	40	44.2	110	70-131	
Methyl-tert-butyl ether	ug/L	20	18.5	92	65-136	
Methylene Chloride	ug/L	20	19.8	99	72-133	
o-Xylene	ug/L	20	22.0	110	70-130	
Styrene	ug/L	20	22.1	111	70-130	
Tetrachloroethene	ug/L	20	21.3	107	70-130	
Toluene	ug/L	20	22.1	110	84-124	
trans-1,2-Dichloroethene	ug/L	20	19.8	99	70-133	
trans-1,3-Dichloropropene	ug/L	20	22.8	114	67-130	
Trichloroethene	ug/L	20	21.5	108	70-130	
Trichlorofluoromethane	ug/L	20	22.6	113	69-147	
Vinyl chloride	ug/L	20	20.7	104	48-134	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			97	70-130	
Toluene-d8 (S)	%			103	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1731807 1731808

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40173490002 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1,1,1-Trichloroethane	ug/L	<0.24	50	50	52.2	54.3	104	109	70-136	4	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	50	50	53.2	54.3	106	109	67-133	2	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	54.3	55.4	109	111	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	48.2	49.8	96	100	70-139	3	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	51.3	52.8	103	106	72-137	3	20	
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	50.1	53.5	100	107	68-130	7	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	52.4	55.8	105	112	60-130	6	21	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	52.0	54.4	104	109	70-130	5	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	51.4	52.5	103	105	70-130	2	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	52.0	53.9	104	108	71-137	4	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	54.6	56.8	109	114	78-130	4	20	
1,3-Dichlorobenzene	ug/L	<0.63	50	50	50.9	52.0	102	104	70-130	2	20	
1,4-Dichlorobenzene	ug/L	<0.94	50	50	50.7	52.2	101	104	70-130	3	20	
Benzene	ug/L	<0.25	50	50	51.7	54.2	103	108	66-143	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1731807		1731808		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40173490002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Bromodichloromethane	ug/L	<0.36	50	50	52.6	54.6	105	109	70-130	4	20		
Bromoform	ug/L	<4.0	50	50	49.5	50.4	99	101	64-134	2	20		
Bromomethane	ug/L	<0.97	50	50	32.5	36.6	65	73	29-136	12	25		
Carbon tetrachloride	ug/L	<0.17	50	50	52.3	53.7	105	107	73-142	3	20		
Chlorobenzene	ug/L	<0.71	50	50	52.6	54.2	105	108	70-130	3	20		
Chloroethane	ug/L	<1.3	50	50	47.6	50.3	95	101	58-138	6	20		
Chloroform	ug/L	<1.3	50	50	51.3	53.2	103	106	80-131	4	20		
Chloromethane	ug/L	<2.2	50	50	43.9	46.1	88	92	24-125	5	20		
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	50.6	53.9	101	108	68-137	6	22		
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	54.3	57.1	109	114	70-130	5	20		
Dibromochloromethane	ug/L	<2.6	50	50	52.1	53.7	104	107	70-131	3	20		
Dichlorodifluoromethane	ug/L	<0.50	50	50	45.3	46.6	91	93	10-127	3	20		
Ethylbenzene	ug/L	<0.22	50	50	56.1	57.4	112	115	81-136	2	20		
Isopropylbenzene (Cumene)	ug/L	<0.39	50	50	57.8	58.8	116	118	70-132	2	20		
m&p-Xylene	ug/L	<0.47	100	100	111	114	111	114	70-135	2	20		
Methyl-tert-butyl ether	ug/L	<1.2	50	50	45.8	47.8	92	96	58-142	4	23		
Methylene Chloride	ug/L	<0.58	50	50	46.9	48.8	94	98	69-137	4	20		
o-Xylene	ug/L	<0.26	50	50	55.7	57.1	111	114	70-132	2	20		
Styrene	ug/L	<0.47	50	50	56.7	57.3	113	115	70-130	1	20		
Tetrachloroethene	ug/L	<0.33	50	50	52.6	53.8	105	108	70-132	2	20		
Toluene	ug/L	<0.17	50	50	54.2	56.0	108	112	81-130	3	20		
trans-1,2-Dichloroethene	ug/L	<1.1	50	50	49.7	50.6	99	101	70-136	2	20		
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	62.2	64.1	124	128	67-130	3	20		
Trichloroethene	ug/L	<0.26	50	50	53.6	54.8	107	110	70-131	2	20		
Trichlorofluoromethane	ug/L	<0.21	50	50	55.0	57.1	110	114	66-150	4	20		
Vinyl chloride	ug/L	<0.17	50	50	50.1	52.1	100	104	46-134	4	20		
4-Bromofluorobenzene (S)	%						100	98	70-130				
Dibromofluoromethane (S)	%						97	97	70-130				
Toluene-d8 (S)	%						103	100	70-130				

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 47358.003 KOELLER ONE

Pace Project No.: 40173494

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40173494001	MW-1	EPA 8260	296374		
40173494002	MW-2	EPA 8260	296374		
40173494003	MW-3	EPA 8260	296374		
40173494004	MW-4	EPA 8260	296374		
40173494005	MW-6	EPA 8260	296374		
40173494006	MW-6 DUP	EPA 8260	296374		
40173494007	TRIP BLANK	EPA 8260	296374		

REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: Gannett Fleming
 Branch/Location: Madison, WI
 Project Contact: Anthony Miller
 Phone: 608-836-1500
 Project Number: 47358.003
 Project Name: Koeller One
 Project State: WI
 Sampled By (Print): Chelsea Payne
 Sampled By (Sign): [Signature]
 PO #: _____ Regulatory Program: _____



CHAIN OF CUSTODY

***Preservation Codes**
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?
(YES/NO)
 PRESERVATION
(CODE)*

Y/N	Pick Letter	Analyses Requested	DATE	TIME	MATRIX
N	B	VOC w/ List	8/1/18	13:30	GW
				11:20	
				11:45	
				13:15	
				12:15	
				12:15	

Quote #: _____
 Mail To Contact: Anthony Miller
 Mail To Company: Gannett Fleming
 Mail To Address: 8025 Excelsior Dr. Madison, WI 53717
 Invoice To Contact: _____
 Invoice To Company: See
 Invoice To Address: Mail to
 Invoice To Phone: 608-836-1500
 CLIENT COMMENTS: _____
 LAB COMMENTS (Lab Use Only): _____
 Profile #: _____

Data Package Options (billable)
 EPA Level III
 EPA Level IV

MS/MSD
 On your sample (billable)
 NOT needed on your sample

Matrix Codes
 A = Air W = Water
 B = Biota DW = Drinking Water
 C = Charcoal GW = Ground Water
 O = Oil SW = Surface Water
 S = Soil WW = Waste Water
 SI = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	MW-1	8/1/18	13:30	GW
002	MW-2		11:20	
003	MW-3		11:45	
004	MW-4		13:15	
005	MW-6		12:15	
006	MW-6 dup		12:15	
007	Trip Bknk			

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)
 Date Needed: _____

Transmit Prelim Rush Results by (complete what you want): _____

Relinquished By: <u>[Signature]</u> Date/Time: <u>8/2/18 10:00</u>	Received By: _____ Date/Time: _____
Relinquished By: <u>[Signature]</u> Date/Time: <u>8-3-18 0910</u>	Received By: <u>[Signature]</u> Date/Time: <u>8-3-18 0910</u>
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____

Samples on HOLD are subject to special pricing and release of liability

PACE Project No. 40173494

Receipt Temp: ROT °C

Sample Receipt pH: OK / Adjusted

Cooler Custody Seal: Present / Not Present Intact / Not Intact

Client Name: Garnett Heming Sample Preservation Receipt Form
Project # 40173494

All containers needing preservation have been checked and noted below: Yes No N/A

Initial when completed:

Date/Time:

Lab Lot# of pH paper:

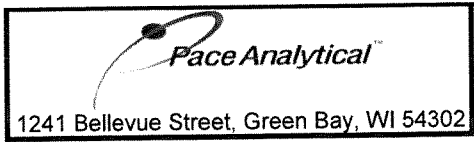
Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass						Plastic						Vials				Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)						
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU								WPFU	SP5T	ZPLC	GN		
001																	3																	2.5 / 5 / 10	
002																	3																		2.5 / 5 / 10
003																	3																		2.5 / 5 / 10
004																	3																		2.5 / 5 / 10
005																	3																		2.5 / 5 / 10
006																	3																		2.5 / 5 / 10
007																	2																		2.5 / 5 / 10
008																																			2.5 / 5 / 10
009																																			2.5 / 5 / 10
010																																			2.5 / 5 / 10
011																																			2.5 / 5 / 10
012																																			2.5 / 5 / 10
013																																			2.5 / 5 / 10
014																																			2.5 / 5 / 10
015																																			2.5 / 5 / 10
016																																			2.5 / 5 / 10
017																																			2.5 / 5 / 10
018																																			2.5 / 5 / 10
019																																			2.5 / 5 / 10
020																																			2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : Yes No N/A *If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

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Document Name: Sample Condition Upon Receipt (SCUR)
Document No.: F-GB-C-031-Rev.07

Document Revised: 25Apr2018
Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: Garnett Fleming

Project #:

WO#: 40173494
Barcode: 40173494

Courier: CS Logistics Fed Ex Speedee UPS Walto
 Client Pace Other: _____

Tracking #: 3408080118

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Custody Seal on Samples Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used SR - N/A Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROT Corr: _____

Temp Blank Present: yes no Biological Tissue is Frozen: yes no

Person examining contents:
Date: 8-3-18
Initials: SKW

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>402</u>		

Client Notification/ Resolution: _____ If checked, see attached form for additional comments

Person Contacted: _____ Date/Time: _____
Comments/ Resolution: _____

Project Manager Review: RWR for pm

Date: 8/3/18

APPENDIX B

**CHART SHOWING DEPTH TO WATER & PCE CONCENTRATIONS
MEASURED IN MW-1 - OCTOBER 2006 THROUGH AUGUST 2018**

PCE CONCENTRATIONS AND DEPTH TO WATER TABLE MEASURED IN MW-1
OCTOBER 2006 - AUGUST 2018

