

Vitale, Matthew J - DNR

From: Ken Shimko <kshimko.meridianenv@gmail.com>
Sent: Thursday, March 22, 2018 9:00 PM
To: Vitale, Matthew J - DNR
Subject: RE: PECFA No. 54755-9999-25 - Julson Store - GW samples PVOC+N (not VOC)
Attachments: Julson Dec GW samples.pdf

Follow Up Flag: Follow up
Flag Status: Completed

See attached lab report...primarily PVOC+N...some benzenes (isopropyl, n-butyl, n-propyl) typical of petroleum

I think we are OK with just PVOC+N...

From: Vitale, Matthew J - DNR [mailto:Matthew.Vitale@wisconsin.gov]
Sent: Thursday, March 22, 2018 2:35 PM
To: Ken Shimko <kshimko.meridianenv@gmail.com>
Subject: RE: PECFA No. 54755-9999-25 - Julson Store - GW samples PVOC+N (not VOC)

I take it there were there no detects of non PVOCs in the first round's samples?

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Matthew Vitale

Phone: (715) 839-3760

Matthew.Vitale@wisconsin.gov

From: Ken Shimko [mailto:kshimko.meridianenv@gmail.com]
Sent: Tuesday, March 20, 2018 5:36 PM
To: Vitale, Matthew J - DNR <Matthew.Vitale@wisconsin.gov>
Subject: PECFA No. 54755-9999-25 - Julson Store - GW samples PVOC+N (not VOC)

Hi Matt.

I am writing to confirm that second round of ground water samples for the Julson Store site will be analyzed for PVOC+Naphthalene (U&C W4) (instead of VOC W5) per attached Change Order.

Please let me know if you have any questions/comments.

Thanks

Kenneth Shimko, PG
Meridian Environmental Consulting, LLC
2711 North Elco Road
Fall Creek, Wisconsin 54742
(715)832-6608 (office)
(715)579-0723 (cell)

(715)832-6797 (Fax)

Email: kshimko.meridianenv@gmail.com

From: Kent, Aaron T - DNR [<mailto:Aaron.Kent@wisconsin.gov>]

Sent: Tuesday, October 31, 2017 3:17 PM

To: Ken Shimko <kshimko.meridianenv@gmail.com>

Cc: Vitale, Matthew J - DNR <Matthew.Vitale@wisconsin.gov>

Subject: RE: julson U&C

Ken – I have attached the approval letter addressed to the RP - John Marum. Let us know if you have any other questions or concerns.

thanks

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Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Aaron T. Kent

Phone: 715-839-1602

aaron.kent@wisconsin.gov

From: Ken Shimko [<mailto:kshimko.meridianenv@gmail.com>]

Sent: Tuesday, October 31, 2017 2:37 PM

To: Kent, Aaron T - DNR <Aaron.Kent@wisconsin.gov>

Subject: RE: julson U&C

Aaron.

I think I understand what you want to do...

- Five 15' MWs
- 1 PZ (30')
- Install one SB (16') in tank basin
- Collect 12 soil samples (full VOC & Pb) from 5 MWs & 1 SB (2 sample per boring...1 from 3 ft (DC) and one from just above water table (capillary fringe or "smear zone")
- Collect two rounds of water samples(5 MWs, 1 PZ, 1 PW):
 - Rnd 1 is VOC & Pb (524.2 from PW)
 - Rnd 2 is PVOC+Naph+Pb unless we find significant VOC impacts in Rnd 1
- Site Survey Map
- Dispose investigative waste (soil and purge/develop water)
- Slug tests
- SB/MW Permit (Buffalo Cty Hwy. Dept)
- Chg Order

Go ahead and finalize unless you have questions/comments for me.

(tentative schedule: install MWs, SB, PZ in November. Sample December & March. Report in May. Contingent upon DNR finishing Chg. Order ...otherwise we will need to bump everything a month(s) due to driller and consultant schedules).

Kenneth Shimko, PG
Meridian Environmental Consulting, LLC
2711 North Elco Road
Fall Creek, Wisconsin 54742
(715)832-6608 (office)
(715)579-0723 (cell)
(715)832-6797 (Fax)
Email: kshimko.meridianenv@gmail.com

From: Kent, Aaron T - DNR [<mailto:Aaron.Kent@wisconsin.gov>]
Sent: Tuesday, October 31, 2017 2:03 PM
To: Ken Shimko <kshimko.meridianenv@gmail.com>
Subject: julson U&C

I'm going to call you to discuss before I finalize

Thanks,
Aaron

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Aaron T. Kent

Hydrogeologist – Waste & Materials Management Program
Wisconsin Department of Natural Resources
1300 W. Clairemont Ave., Eau Claire, WI 54701
Phone: 715-839-1602
aaron.kent@wisconsin.gov



December 14, 2017

Kenneth Shimko
Meridian Environmental Consulting, LLC
2711 North Elco Rd
Fall Creek, WI 54742

RE: Project: JULSON
Pace Project No.: 40161821

Dear Kenneth Shimko:

Enclosed are the analytical results for sample(s) received by the laboratory on December 05, 2017. 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.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,



Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: JULSON
Pace Project No.: 40161821

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: JULSON
Pace Project No.: 40161821

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40161821001	MW-1	Water	12/03/17 00:00	12/05/17 10:00
40161821002	MW-2	Water	12/03/17 00:00	12/05/17 10:00
40161821003	MW-3	Water	12/03/17 00:00	12/05/17 10:00
40161821004	MW-4	Water	12/03/17 00:00	12/05/17 10:00
40161821005	MW-5A	Water	12/03/17 00:00	12/05/17 10:00
40161821006	MW-5B	Water	12/03/17 00:00	12/05/17 10:00
40161821007	WELL	Water	12/03/17 00:00	12/05/17 10:00
40161821008	TB	Water	12/03/17 00:00	12/05/17 10:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: JULSON
Pace Project No.: 40161821

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40161821001	MW-1	EPA 6010	JLD	1	PASI-G
		EPA 8260	MDS	64	PASI-G
40161821002	MW-2	EPA 6010	JLD	1	PASI-G
		EPA 8260	MDS	64	PASI-G
40161821003	MW-3	EPA 6010	JLD	1	PASI-G
		EPA 8260	MDS	64	PASI-G
40161821004	MW-4	EPA 6010	JLD	1	PASI-G
		EPA 8260	MDS	64	PASI-G
40161821005	MW-5A	EPA 6010	JLD	1	PASI-G
		EPA 8260	MDS	64	PASI-G
40161821006	MW-5B	EPA 6010	JLD	1	PASI-G
		EPA 8260	MDS	64	PASI-G
40161821008	TB	EPA 8260	HNW	64	PASI-G

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: JULSON
Pace Project No.: 40161821

Method: EPA 6010
Description: 6010 MET ICP, Dissolved
Client: Meridian Environmental Consulting, LLC
Date: December 14, 2017

General Information:

6 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

P4: Sample field preservation does not meet EPA or method recommendations for this analysis.

- MW-2 (Lab ID: 40161821002)
- MW-3 (Lab ID: 40161821003)
- MW-4 (Lab ID: 40161821004)
- MW-5A (Lab ID: 40161821005)
- MW-5B (Lab ID: 40161821006)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 276346

B: Analyte was detected in the associated method blank.

- BLANK for HBN 276346 [ICP/1485 (Lab ID: 1625411)]
 - Lead, Dissolved

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: JULSON
Pace Project No.: 40161821

Method: EPA 8260
Description: 8260 MSV
Client: Meridian Environmental Consulting, LLC
Date: December 14, 2017

General Information:

7 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 276249

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40161867012

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 1624939)
 - 1,1,2,2-Tetrachloroethane
 - 1,2-Dibromo-3-chloropropane
 - m&p-Xylene

R1: RPD value was outside control limits.

- MSD (Lab ID: 1624939)
 - 1,2-Dibromo-3-chloropropane
 - Bromomethane

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: JULSON
Pace Project No.: 40161821

Method: EPA 8260
Description: 8260 MSV
Client: Meridian Environmental Consulting, LLC
Date: December 14, 2017

Analyte Comments:

QC Batch: 276285

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- MW-3 (Lab ID: 40161821003)
- 4-Bromofluorobenzene (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: MW-1 **Lab ID: 40161821001** Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Lead, Dissolved	6.7J	ug/L	13.0	4.3	1		12/06/17 15:00	7439-92-1	B
8260 MSV		Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		12/06/17 16:53	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		12/06/17 16:53	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		12/06/17 16:53	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		12/06/17 16:53	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		12/06/17 16:53	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		12/06/17 16:53	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		12/06/17 16:53	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		12/06/17 16:53	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		12/06/17 16:53	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		12/06/17 16:53	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		12/06/17 16:53	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		12/06/17 16:53	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		12/06/17 16:53	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		12/06/17 16:53	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		12/06/17 16:53	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		12/06/17 16:53	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		12/06/17 16:53	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		12/06/17 16:53	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		12/06/17 16:53	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		12/06/17 16:53	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		12/06/17 16:53	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		12/06/17 16:53	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		12/06/17 16:53	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		12/06/17 16:53	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		12/06/17 16:53	75-09-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: MW-1 Lab ID: 40161821001 Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Naphthalene	<2.5	ug/L	5.0	2.5	1		12/06/17 16:53	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		12/06/17 16:53	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		12/06/17 16:53	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		12/06/17 16:53	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		12/06/17 16:53	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		12/06/17 16:53	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		12/06/17 16:53	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		12/06/17 16:53	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		12/06/17 16:53	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		12/06/17 16:53	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		12/06/17 16:53	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	61-130		1		12/06/17 16:53	460-00-4	
Dibromofluoromethane (S)	104	%	67-130		1		12/06/17 16:53	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1		12/06/17 16:53	2037-26-5	

Sample: MW-2 Lab ID: 40161821002 Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved Analytical Method: EPA 6010									
Lead, Dissolved	7.0J	ug/L	13.0	4.3	1		12/11/17 17:28	7439-92-1	P4
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<4.5	ug/L	25.0	4.5	25		12/06/17 18:41	630-20-6	
1,1,1-Trichloroethane	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	71-55-6	
1,1,2,2-Tetrachloroethane	<6.2	ug/L	25.0	6.2	25		12/06/17 18:41	79-34-5	
1,1,2-Trichloroethane	<4.9	ug/L	25.0	4.9	25		12/06/17 18:41	79-00-5	
1,1-Dichloroethane	<6.0	ug/L	25.0	6.0	25		12/06/17 18:41	75-34-3	
1,1-Dichloroethene	<10.3	ug/L	25.0	10.3	25		12/06/17 18:41	75-35-4	
1,1-Dichloropropene	<11.0	ug/L	25.0	11.0	25		12/06/17 18:41	563-58-6	
1,2,3-Trichlorobenzene	<53.3	ug/L	125	53.3	25		12/06/17 18:41	87-61-6	
1,2,3-Trichloropropane	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	96-18-4	
1,2,4-Trichlorobenzene	<55.2	ug/L	125	55.2	25		12/06/17 18:41	120-82-1	
1,2,4-Trimethylbenzene	557	ug/L	25.0	12.5	25		12/06/17 18:41	95-63-6	
1,2-Dibromo-3-chloropropane	<54.1	ug/L	125	54.1	25		12/06/17 18:41	96-12-8	
1,2-Dibromoethane (EDB)	<4.4	ug/L	25.0	4.4	25		12/06/17 18:41	106-93-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: MW-2 Lab ID: 40161821002 Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
1,2-Dichlorobenzene	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	95-50-1	
1,2-Dichloroethane	<4.2	ug/L	25.0	4.2	25		12/06/17 18:41	107-06-2	
1,2-Dichloropropane	<5.8	ug/L	25.0	5.8	25		12/06/17 18:41	78-87-5	
1,3,5-Trimethylbenzene	158	ug/L	25.0	12.5	25		12/06/17 18:41	108-67-8	
1,3-Dichlorobenzene	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	541-73-1	
1,3-Dichloropropane	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	142-28-9	
1,4-Dichlorobenzene	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	106-46-7	
2,2-Dichloropropane	<12.1	ug/L	25.0	12.1	25		12/06/17 18:41	594-20-7	
2-Chlorotoluene	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	95-49-8	
4-Chlorotoluene	<5.3	ug/L	25.0	5.3	25		12/06/17 18:41	106-43-4	
Benzene	154	ug/L	25.0	12.5	25		12/06/17 18:41	71-43-2	
Bromobenzene	<5.8	ug/L	25.0	5.8	25		12/06/17 18:41	108-86-1	
Bromochloromethane	<8.5	ug/L	25.0	8.5	25		12/06/17 18:41	74-97-5	
Bromodichloromethane	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	75-27-4	
Bromoform	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	75-25-2	
Bromomethane	<60.9	ug/L	125	60.9	25		12/06/17 18:41	74-83-9	
Carbon tetrachloride	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	56-23-5	
Chlorobenzene	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	108-90-7	
Chloroethane	<9.4	ug/L	25.0	9.4	25		12/06/17 18:41	75-00-3	
Chloroform	<62.5	ug/L	125	62.5	25		12/06/17 18:41	67-66-3	
Chloromethane	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	74-87-3	
Dibromochloromethane	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	124-48-1	
Dibromomethane	<10.7	ug/L	25.0	10.7	25		12/06/17 18:41	74-95-3	
Dichlorodifluoromethane	<5.6	ug/L	25.0	5.6	25		12/06/17 18:41	75-71-8	
Diisopropyl ether	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	108-20-3	
Ethylbenzene	522	ug/L	25.0	12.5	25		12/06/17 18:41	100-41-4	
Hexachloro-1,3-butadiene	<52.6	ug/L	125	52.6	25		12/06/17 18:41	87-68-3	
Isopropylbenzene (Cumene)	29.6	ug/L	25.0	3.6	25		12/06/17 18:41	98-82-8	
Methyl-tert-butyl ether	<4.4	ug/L	25.0	4.4	25		12/06/17 18:41	1634-04-4	
Methylene Chloride	<5.8	ug/L	25.0	5.8	25		12/06/17 18:41	75-09-2	
Naphthalene	120J	ug/L	125	62.5	25		12/06/17 18:41	91-20-3	
Styrene	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	100-42-5	
Tetrachloroethene	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	127-18-4	
Toluene	2740	ug/L	25.0	12.5	25		12/06/17 18:41	108-88-3	
Trichloroethene	<8.3	ug/L	25.0	8.3	25		12/06/17 18:41	79-01-6	
Trichlorofluoromethane	<4.6	ug/L	25.0	4.6	25		12/06/17 18:41	75-69-4	
Vinyl chloride	<4.4	ug/L	25.0	4.4	25		12/06/17 18:41	75-01-4	
cis-1,2-Dichloroethene	<6.4	ug/L	25.0	6.4	25		12/06/17 18:41	156-59-2	
cis-1,3-Dichloropropene	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	10061-01-5	
m&p-Xylene	1720	ug/L	50.0	25.0	25		12/06/17 18:41	179601-23-1	
n-Butylbenzene	32.0	ug/L	25.0	12.5	25		12/06/17 18:41	104-51-8	
n-Propylbenzene	90.3	ug/L	25.0	12.5	25		12/06/17 18:41	103-65-1	
o-Xylene	601	ug/L	25.0	12.5	25		12/06/17 18:41	95-47-6	
p-Isopropyltoluene	<12.5	ug/L	25.0	12.5	25		12/06/17 18:41	99-87-6	
sec-Butylbenzene	<54.7	ug/L	125	54.7	25		12/06/17 18:41	135-98-8	
tert-Butylbenzene	<4.5	ug/L	25.0	4.5	25		12/06/17 18:41	98-06-6	

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: MW-2 Lab ID: 40161821002 Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
trans-1,2-Dichloroethene	<6.4	ug/L	25.0	6.4	25		12/06/17 18:41	156-60-5	
trans-1,3-Dichloropropene	<5.7	ug/L	25.0	5.7	25		12/06/17 18:41	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	61-130		25		12/06/17 18:41	460-00-4	
Dibromofluoromethane (S)	100	%	67-130		25		12/06/17 18:41	1868-53-7	
Toluene-d8 (S)	94	%	70-130		25		12/06/17 18:41	2037-26-5	

Sample: MW-3 Lab ID: 40161821003 Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Lead, Dissolved	<4.3	ug/L	13.0	4.3	1		12/11/17 17:35	7439-92-1	P4
8260 MSV		Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	<9.0	ug/L	50.0	9.0	50		12/06/17 19:02	630-20-6	
1,1,1-Trichloroethane	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	71-55-6	
1,1,2,2-Tetrachloroethane	<12.5	ug/L	50.0	12.5	50		12/06/17 19:02	79-34-5	
1,1,2-Trichloroethane	<9.9	ug/L	50.0	9.9	50		12/06/17 19:02	79-00-5	
1,1-Dichloroethane	<12.1	ug/L	50.0	12.1	50		12/06/17 19:02	75-34-3	
1,1-Dichloroethene	<20.5	ug/L	50.0	20.5	50		12/06/17 19:02	75-35-4	
1,1-Dichloropropene	<22.1	ug/L	50.0	22.1	50		12/06/17 19:02	563-58-6	
1,2,3-Trichlorobenzene	<107	ug/L	250	107	50		12/06/17 19:02	87-61-6	
1,2,3-Trichloropropane	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	96-18-4	
1,2,4-Trichlorobenzene	<110	ug/L	250	110	50		12/06/17 19:02	120-82-1	
1,2,4-Trimethylbenzene	1020	ug/L	50.0	25.0	50		12/06/17 19:02	95-63-6	
1,2-Dibromo-3-chloropropane	<108	ug/L	250	108	50		12/06/17 19:02	96-12-8	
1,2-Dibromoethane (EDB)	<8.9	ug/L	50.0	8.9	50		12/06/17 19:02	106-93-4	
1,2-Dichlorobenzene	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	95-50-1	
1,2-Dichloroethane	<8.4	ug/L	50.0	8.4	50		12/06/17 19:02	107-06-2	
1,2-Dichloropropane	<11.7	ug/L	50.0	11.7	50		12/06/17 19:02	78-87-5	
1,3,5-Trimethylbenzene	288	ug/L	50.0	25.0	50		12/06/17 19:02	108-67-8	
1,3-Dichlorobenzene	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	541-73-1	
1,3-Dichloropropane	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	142-28-9	
1,4-Dichlorobenzene	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	106-46-7	
2,2-Dichloropropane	<24.2	ug/L	50.0	24.2	50		12/06/17 19:02	594-20-7	
2-Chlorotoluene	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	95-49-8	
4-Chlorotoluene	<10.7	ug/L	50.0	10.7	50		12/06/17 19:02	106-43-4	
Benzene	256	ug/L	50.0	25.0	50		12/06/17 19:02	71-43-2	
Bromobenzene	<11.5	ug/L	50.0	11.5	50		12/06/17 19:02	108-86-1	
Bromochloromethane	<17.0	ug/L	50.0	17.0	50		12/06/17 19:02	74-97-5	
Bromodichloromethane	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	75-27-4	
Bromoform	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	75-25-2	
Bromomethane	<122	ug/L	250	122	50		12/06/17 19:02	74-83-9	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: MW-3 Lab ID: 40161821003 Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Carbon tetrachloride	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	56-23-5	
Chlorobenzene	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	108-90-7	
Chloroethane	<18.7	ug/L	50.0	18.7	50		12/06/17 19:02	75-00-3	
Chloroform	<125	ug/L	250	125	50		12/06/17 19:02	67-66-3	
Chloromethane	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	74-87-3	
Dibromochloromethane	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	124-48-1	
Dibromomethane	<21.3	ug/L	50.0	21.3	50		12/06/17 19:02	74-95-3	
Dichlorodifluoromethane	<11.2	ug/L	50.0	11.2	50		12/06/17 19:02	75-71-8	
Diisopropyl ether	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	108-20-3	
Ethylbenzene	457	ug/L	50.0	25.0	50		12/06/17 19:02	100-41-4	
Hexachloro-1,3-butadiene	<105	ug/L	250	105	50		12/06/17 19:02	87-68-3	
Isopropylbenzene (Cumene)	40.9J	ug/L	50.0	7.2	50		12/06/17 19:02	98-82-8	
Methyl-tert-butyl ether	<8.7	ug/L	50.0	8.7	50		12/06/17 19:02	1634-04-4	
Methylene Chloride	<11.6	ug/L	50.0	11.6	50		12/06/17 19:02	75-09-2	
Naphthalene	231J	ug/L	250	125	50		12/06/17 19:02	91-20-3	
Styrene	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	100-42-5	
Tetrachloroethene	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	127-18-4	
Toluene	383	ug/L	50.0	25.0	50		12/06/17 19:02	108-88-3	
Trichloroethene	<16.5	ug/L	50.0	16.5	50		12/06/17 19:02	79-01-6	
Trichlorofluoromethane	<9.2	ug/L	50.0	9.2	50		12/06/17 19:02	75-69-4	
Vinyl chloride	<8.8	ug/L	50.0	8.8	50		12/06/17 19:02	75-01-4	
cis-1,2-Dichloroethene	<12.8	ug/L	50.0	12.8	50		12/06/17 19:02	156-59-2	
cis-1,3-Dichloropropene	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	10061-01-5	
m&p-Xylene	3990	ug/L	100	50.0	50		12/06/17 19:02	179601-23-1	
n-Butylbenzene	32.0J	ug/L	50.0	25.0	50		12/06/17 19:02	104-51-8	
n-Propylbenzene	80.4	ug/L	50.0	25.0	50		12/06/17 19:02	103-65-1	
o-Xylene	40.5J	ug/L	50.0	25.0	50		12/06/17 19:02	95-47-6	
p-Isopropyltoluene	<25.0	ug/L	50.0	25.0	50		12/06/17 19:02	99-87-6	
sec-Butylbenzene	<109	ug/L	250	109	50		12/06/17 19:02	135-98-8	
tert-Butylbenzene	<9.0	ug/L	50.0	9.0	50		12/06/17 19:02	98-06-6	
trans-1,2-Dichloroethene	<12.8	ug/L	50.0	12.8	50		12/06/17 19:02	156-60-5	
trans-1,3-Dichloropropene	<11.5	ug/L	50.0	11.5	50		12/06/17 19:02	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	61-130		50		12/06/17 19:02	460-00-4	D3
Dibromofluoromethane (S)	105	%	67-130		50		12/06/17 19:02	1868-53-7	
Toluene-d8 (S)	97	%	70-130		50		12/06/17 19:02	2037-26-5	

Sample: MW-4 Lab ID: 40161821004 Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved Analytical Method: EPA 6010									
Lead, Dissolved	<4.3	ug/L	13.0	4.3	1		12/11/17 17:37	7439-92-1	P4

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: MW-4 **Lab ID: 40161821004** Collected: 12/03/17 00:00 Received: 12/05/17 10:00 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		12/06/17 17:15	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		12/06/17 17:15	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		12/06/17 17:15	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		12/06/17 17:15	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		12/06/17 17:15	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		12/06/17 17:15	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		12/06/17 17:15	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		12/06/17 17:15	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		12/06/17 17:15	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		12/06/17 17:15	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		12/06/17 17:15	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		12/06/17 17:15	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		12/06/17 17:15	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		12/06/17 17:15	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		12/06/17 17:15	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		12/06/17 17:15	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		12/06/17 17:15	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		12/06/17 17:15	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		12/06/17 17:15	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		12/06/17 17:15	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		12/06/17 17:15	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		12/06/17 17:15	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		12/06/17 17:15	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		12/06/17 17:15	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		12/06/17 17:15	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		12/06/17 17:15	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	127-18-4	

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: MW-4 **Lab ID: 40161821004** Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Toluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		12/06/17 17:15	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		12/06/17 17:15	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		12/06/17 17:15	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		12/06/17 17:15	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		12/06/17 17:15	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:15	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		12/06/17 17:15	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		12/06/17 17:15	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		12/06/17 17:15	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		12/06/17 17:15	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	90	%	61-130		1		12/06/17 17:15	460-00-4	
Dibromofluoromethane (S)	105	%	67-130		1		12/06/17 17:15	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1		12/06/17 17:15	2037-26-5	

Sample: MW-5A **Lab ID: 40161821005** Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved Analytical Method: EPA 6010									
Lead, Dissolved	<4.3	ug/L	13.0	4.3	1		12/11/17 17:40	7439-92-1	P4
8260 MSV Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		12/06/17 17:36	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		12/06/17 17:36	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		12/06/17 17:36	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		12/06/17 17:36	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		12/06/17 17:36	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		12/06/17 17:36	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		12/06/17 17:36	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		12/06/17 17:36	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		12/06/17 17:36	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		12/06/17 17:36	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		12/06/17 17:36	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		12/06/17 17:36	78-87-5	

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: MW-5A Lab ID: 40161821005 Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		12/06/17 17:36	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		12/06/17 17:36	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		12/06/17 17:36	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		12/06/17 17:36	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		12/06/17 17:36	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		12/06/17 17:36	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		12/06/17 17:36	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		12/06/17 17:36	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		12/06/17 17:36	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		12/06/17 17:36	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		12/06/17 17:36	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		12/06/17 17:36	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		12/06/17 17:36	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		12/06/17 17:36	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		12/06/17 17:36	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		12/06/17 17:36	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		12/06/17 17:36	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		12/06/17 17:36	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		12/06/17 17:36	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:36	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		12/06/17 17:36	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		12/06/17 17:36	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		12/06/17 17:36	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		12/06/17 17:36	10061-02-6	

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: MW-5A **Lab ID: 40161821005** Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Surrogates									
4-Bromofluorobenzene (S)	90	%	61-130		1		12/06/17 17:36	460-00-4	
Dibromofluoromethane (S)	103	%	67-130		1		12/06/17 17:36	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		12/06/17 17:36	2037-26-5	

Sample: MW-5B **Lab ID: 40161821006** Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Lead, Dissolved	<4.3	ug/L	13.0	4.3	1		12/11/17 17:42	7439-92-1	P4
8260 MSV		Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		12/06/17 17:57	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		12/06/17 17:57	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		12/06/17 17:57	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		12/06/17 17:57	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		12/06/17 17:57	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		12/06/17 17:57	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		12/06/17 17:57	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		12/06/17 17:57	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		12/06/17 17:57	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		12/06/17 17:57	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		12/06/17 17:57	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		12/06/17 17:57	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		12/06/17 17:57	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		12/06/17 17:57	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		12/06/17 17:57	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		12/06/17 17:57	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		12/06/17 17:57	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	108-90-7	

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: MW-5B **Lab ID: 40161821006** Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Chloroethane	<0.37	ug/L	1.0	0.37	1		12/06/17 17:57	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		12/06/17 17:57	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		12/06/17 17:57	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		12/06/17 17:57	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		12/06/17 17:57	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		12/06/17 17:57	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		12/06/17 17:57	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		12/06/17 17:57	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		12/06/17 17:57	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		12/06/17 17:57	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		12/06/17 17:57	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		12/06/17 17:57	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		12/06/17 17:57	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		12/06/17 17:57	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:57	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		12/06/17 17:57	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		12/06/17 17:57	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		12/06/17 17:57	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		12/06/17 17:57	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	90	%	61-130		1		12/06/17 17:57	460-00-4	
Dibromofluoromethane (S)	105	%	67-130		1		12/06/17 17:57	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		12/06/17 17:57	2037-26-5	

Sample: TB **Lab ID: 40161821008** Collected: 12/03/17 00:00 Received: 12/05/17 10:00 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		12/06/17 17:16	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		12/06/17 17:16	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		12/06/17 17:16	79-00-5	

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: TB **Lab ID: 40161821008** Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		12/06/17 17:16	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		12/06/17 17:16	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		12/06/17 17:16	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		12/06/17 17:16	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		12/06/17 17:16	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		12/06/17 17:16	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		12/06/17 17:16	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		12/06/17 17:16	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		12/06/17 17:16	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		12/06/17 17:16	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		12/06/17 17:16	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		12/06/17 17:16	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		12/06/17 17:16	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		12/06/17 17:16	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		12/06/17 17:16	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		12/06/17 17:16	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		12/06/17 17:16	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		12/06/17 17:16	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		12/06/17 17:16	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		12/06/17 17:16	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		12/06/17 17:16	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		12/06/17 17:16	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		12/06/17 17:16	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		12/06/17 17:16	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		12/06/17 17:16	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		12/06/17 17:16	75-01-4	

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ANALYTICAL RESULTS

Project: JULSON
Pace Project No.: 40161821

Sample: TB **Lab ID: 40161821008** Collected: 12/03/17 00:00 Received: 12/05/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		12/06/17 17:16	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		12/06/17 17:16	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		12/06/17 17:16	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		12/06/17 17:16	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		12/06/17 17:16	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		12/06/17 17:16	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		12/06/17 17:16	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	91	%	61-130		1		12/06/17 17:16	460-00-4	
Dibromofluoromethane (S)	101	%	67-130		1		12/06/17 17:16	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		12/06/17 17:16	2037-26-5	

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QUALITY CONTROL DATA

Project: JULSON
Pace Project No.: 40161821

QC Batch: 276346 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40161821001

METHOD BLANK: 1625411 Matrix: Water
Associated Lab Samples: 40161821001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	4.5J	13.0	12/06/17 14:55	

LABORATORY CONTROL SAMPLE: 1625412

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	500	495	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1625413 1625414

Parameter	Units	1625413		1625414		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40161821001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Lead, Dissolved	ug/L	6.7J	500	500	506	497	100	98	75-125	2	20

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QUALITY CONTROL DATA

Project: JULSON
Pace Project No.: 40161821

QC Batch: 276773 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40161821002, 40161821003, 40161821004, 40161821005, 40161821006

METHOD BLANK: 1627518 Matrix: Water
Associated Lab Samples: 40161821002, 40161821003, 40161821004, 40161821005, 40161821006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	<4.3	13.0	12/11/17 17:18	

LABORATORY CONTROL SAMPLE: 1627519

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	500	500	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1627520 1627521

Parameter	Units	MS		MSD		% Rec		% Rec Limits	RPD	Max RPD	Qual
		40161821002 Result	Spike Conc.	Spike Conc.	Result	MS Result	MSD Result				
Lead, Dissolved	ug/L	7.0J	500	500	520	525	103	104	75-125	1	20

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QUALITY CONTROL DATA

Project: JULSON
Pace Project No.: 40161821

QC Batch: 276249 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40161821008

METHOD BLANK: 1624805 Matrix: Water
Associated Lab Samples: 40161821008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	12/06/17 09:15	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	12/06/17 09:15	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	12/06/17 09:15	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	12/06/17 09:15	
1,1-Dichloroethane	ug/L	<0.24	1.0	12/06/17 09:15	
1,1-Dichloroethene	ug/L	<0.41	1.0	12/06/17 09:15	
1,1-Dichloropropene	ug/L	<0.44	1.0	12/06/17 09:15	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	12/06/17 09:15	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	12/06/17 09:15	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	12/06/17 09:15	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	12/06/17 09:15	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	12/06/17 09:15	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	12/06/17 09:15	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	12/06/17 09:15	
1,2-Dichloroethane	ug/L	<0.17	1.0	12/06/17 09:15	
1,2-Dichloropropane	ug/L	<0.23	1.0	12/06/17 09:15	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	12/06/17 09:15	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	12/06/17 09:15	
1,3-Dichloropropane	ug/L	<0.50	1.0	12/06/17 09:15	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	12/06/17 09:15	
2,2-Dichloropropane	ug/L	<0.48	1.0	12/06/17 09:15	
2-Chlorotoluene	ug/L	<0.50	1.0	12/06/17 09:15	
4-Chlorotoluene	ug/L	<0.21	1.0	12/06/17 09:15	
Benzene	ug/L	<0.50	1.0	12/06/17 09:15	
Bromobenzene	ug/L	<0.23	1.0	12/06/17 09:15	
Bromochloromethane	ug/L	<0.34	1.0	12/06/17 09:15	
Bromodichloromethane	ug/L	<0.50	1.0	12/06/17 09:15	
Bromoform	ug/L	<0.50	1.0	12/06/17 09:15	
Bromomethane	ug/L	<2.4	5.0	12/06/17 09:15	
Carbon tetrachloride	ug/L	<0.50	1.0	12/06/17 09:15	
Chlorobenzene	ug/L	<0.50	1.0	12/06/17 09:15	
Chloroethane	ug/L	<0.37	1.0	12/06/17 09:15	
Chloroform	ug/L	<2.5	5.0	12/06/17 09:15	
Chloromethane	ug/L	<0.50	1.0	12/06/17 09:15	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	12/06/17 09:15	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	12/06/17 09:15	
Dibromochloromethane	ug/L	<0.50	1.0	12/06/17 09:15	
Dibromomethane	ug/L	<0.43	1.0	12/06/17 09:15	
Dichlorodifluoromethane	ug/L	<0.22	1.0	12/06/17 09:15	
Diisopropyl ether	ug/L	<0.50	1.0	12/06/17 09:15	
Ethylbenzene	ug/L	<0.50	1.0	12/06/17 09:15	

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QUALITY CONTROL DATA

Project: JULSON
Pace Project No.: 40161821

METHOD BLANK: 1624805

Matrix: Water

Associated Lab Samples: 40161821008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	12/06/17 09:15	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	12/06/17 09:15	
m&p-Xylene	ug/L	<1.0	2.0	12/06/17 09:15	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	12/06/17 09:15	
Methylene Chloride	ug/L	<0.23	1.0	12/06/17 09:15	
n-Butylbenzene	ug/L	<0.50	1.0	12/06/17 09:15	
n-Propylbenzene	ug/L	<0.50	1.0	12/06/17 09:15	
Naphthalene	ug/L	<2.5	5.0	12/06/17 09:15	
o-Xylene	ug/L	<0.50	1.0	12/06/17 09:15	
p-Isopropyltoluene	ug/L	<0.50	1.0	12/06/17 09:15	
sec-Butylbenzene	ug/L	<2.2	5.0	12/06/17 09:15	
Styrene	ug/L	<0.50	1.0	12/06/17 09:15	
tert-Butylbenzene	ug/L	<0.18	1.0	12/06/17 09:15	
Tetrachloroethene	ug/L	<0.50	1.0	12/06/17 09:15	
Toluene	ug/L	<0.50	1.0	12/06/17 09:15	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	12/06/17 09:15	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	12/06/17 09:15	
Trichloroethene	ug/L	<0.33	1.0	12/06/17 09:15	
Trichlorofluoromethane	ug/L	<0.18	1.0	12/06/17 09:15	
Vinyl chloride	ug/L	<0.18	1.0	12/06/17 09:15	
4-Bromofluorobenzene (S)	%	91	61-130	12/06/17 09:15	
Dibromofluoromethane (S)	%	100	67-130	12/06/17 09:15	
Toluene-d8 (S)	%	105	70-130	12/06/17 09:15	

LABORATORY CONTROL SAMPLE: 1624806

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.2	100	70-130	
1,1,1,2-Tetrachloroethane	ug/L	50	64.4	129	70-130	
1,1,2-Trichloroethane	ug/L	50	59.6	119	70-130	
1,1-Dichloroethane	ug/L	50	53.8	108	71-132	
1,1-Dichloroethene	ug/L	50	53.0	106	75-130	
1,2,4-Trichlorobenzene	ug/L	50	56.8	114	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	58.8	118	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	61.9	124	70-130	
1,2-Dichlorobenzene	ug/L	50	59.2	118	70-130	
1,2-Dichloroethane	ug/L	50	54.7	109	70-131	
1,2-Dichloropropane	ug/L	50	52.8	106	80-120	
1,3-Dichlorobenzene	ug/L	50	57.8	116	70-130	
1,4-Dichlorobenzene	ug/L	50	58.2	116	70-130	
Benzene	ug/L	50	52.5	105	73-145	
Bromodichloromethane	ug/L	50	50.0	100	70-130	
Bromoform	ug/L	50	54.8	110	67-130	
Bromomethane	ug/L	50	38.0	76	26-128	

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QUALITY CONTROL DATA

Project: JULSON
Pace Project No.: 40161821

LABORATORY CONTROL SAMPLE: 1624806

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	48.7	97	70-133	
Chlorobenzene	ug/L	50	57.3	115	70-130	
Chloroethane	ug/L	50	47.9	96	58-120	
Chloroform	ug/L	50	51.5	103	80-121	
Chloromethane	ug/L	50	42.4	85	40-127	
cis-1,2-Dichloroethene	ug/L	50	55.8	112	70-130	
cis-1,3-Dichloropropene	ug/L	50	45.4	91	70-130	
Dibromochloromethane	ug/L	50	53.7	107	70-130	
Dichlorodifluoromethane	ug/L	50	31.7	63	20-135	
Ethylbenzene	ug/L	50	58.0	116	87-129	
Isopropylbenzene (Cumene)	ug/L	50	60.3	121	70-130	
m&p-Xylene	ug/L	100	117	117	70-130	
Methyl-tert-butyl ether	ug/L	50	46.2	92	66-143	
Methylene Chloride	ug/L	50	51.4	103	70-130	
o-Xylene	ug/L	50	57.8	116	70-130	
Styrene	ug/L	50	59.2	118	70-130	
Tetrachloroethene	ug/L	50	54.2	108	70-130	
Toluene	ug/L	50	56.4	113	82-130	
trans-1,2-Dichloroethene	ug/L	50	53.0	106	75-132	
trans-1,3-Dichloropropene	ug/L	50	48.1	96	70-130	
Trichloroethene	ug/L	50	55.3	111	70-130	
Trichlorofluoromethane	ug/L	50	49.2	98	76-133	
Vinyl chloride	ug/L	50	49.2	98	57-136	
4-Bromofluorobenzene (S)	%			98	61-130	
Dibromofluoromethane (S)	%			103	67-130	
Toluene-d8 (S)	%			104	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1624938 1624939

Parameter	Units	40161867012		MSD		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
1,1,1-Trichloroethane	ug/L	<2.5	1000	1000	978	1040	98	104	70-134	6	20			
1,1,2,2-Tetrachloroethane	ug/L	<1.2	1000	1000	1070	1310	107	131	70-130	20	20	M1		
1,1,2-Trichloroethane	ug/L	<0.99	1000	1000	1050	1210	105	121	70-130	14	20			
1,1-Dichloroethane	ug/L	<1.2	1000	1000	1030	1070	103	107	71-133	4	20			
1,1-Dichloroethene	ug/L	<2.1	1000	1000	1050	1070	105	107	75-136	2	20			
1,2,4-Trichlorobenzene	ug/L	<11.0	1000	1000	1210	1220	121	122	70-130	1	20			
1,2-Dibromo-3-chloropropane	ug/L	<10.8	1000	1000	955	1250	95	125	63-123	27	20	M1,R1		
1,2-Dibromoethane (EDB)	ug/L	<0.89	1000	1000	1070	1260	107	126	70-130	16	20			
1,2-Dichlorobenzene	ug/L	<2.5	1000	1000	1150	1220	115	122	70-130	6	20			
1,2-Dichloroethane	ug/L	<0.84	1000	1000	997	1090	100	109	70-131	9	20			
1,2-Dichloropropane	ug/L	<1.2	1000	1000	974	1060	97	106	80-120	9	20			
1,3-Dichlorobenzene	ug/L	<2.5	1000	1000	1120	1190	112	119	70-130	6	20			
1,4-Dichlorobenzene	ug/L	<2.5	1000	1000	1130	1180	113	118	70-130	4	20			

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QUALITY CONTROL DATA

Project: JULSON
Pace Project No.: 40161821

Parameter	Units	40161867012		MSD		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec								
MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1624938 1624939																
Benzene	ug/L	<2.5	1000	1000	1010	1050	101	105	73-145	4	20					
Bromodichloromethane	ug/L	<2.5	1000	1000	937	991	94	99	70-130	6	20					
Bromoform	ug/L	<2.5	1000	1000	979	1100	98	110	67-130	12	20					
Bromomethane	ug/L	<12.2	1000	1000	567	728	57	73	26-129	25	20	R1				
Carbon tetrachloride	ug/L	<2.5	1000	1000	941	1000	94	100	70-134	6	20					
Chlorobenzene	ug/L	<2.5	1000	1000	1070	1130	107	113	70-130	5	20					
Chloroethane	ug/L	<1.9	1000	1000	942	991	94	99	58-120	5	20					
Chloroform	ug/L	<12.5	1000	1000	995	1020	100	102	80-121	3	20					
Chloromethane	ug/L	<2.5	1000	1000	928	927	93	93	40-128	0	20					
cis-1,2-Dichloroethene	ug/L	<1.3	1000	1000	962	1010	96	101	70-130	5	20					
cis-1,3-Dichloropropene	ug/L	<2.5	1000	1000	835	939	83	94	70-130	12	20					
Dibromochloromethane	ug/L	<2.5	1000	1000	975	1090	97	109	70-130	11	20					
Dichlorodifluoromethane	ug/L	<1.1	1000	1000	944	975	94	98	20-146	3	20					
Ethylbenzene	ug/L	95.3	1000	1000	1290	1320	119	123	87-129	3	20					
Isopropylbenzene (Cumene)	ug/L	12.8	1000	1000	1170	1220	116	121	70-130	4	20					
m&p-Xylene	ug/L	430	2000	2000	3010	3100	129	134	70-130	3	20	M1				
Methyl-tert-butyl ether	ug/L	<0.87	1000	1000	838	959	84	96	66-143	14	20					
Methylene Chloride	ug/L	<1.2	1000	1000	986	1040	99	104	70-130	5	20					
o-Xylene	ug/L	92.8	1000	1000	1280	1340	119	125	70-130	4	20					
Styrene	ug/L	<2.5	1000	1000	1130	1170	113	117	70-130	3	20					
Tetrachloroethene	ug/L	<2.5	1000	1000	1030	1120	103	112	70-130	8	20					
Toluene	ug/L	3.1J	1000	1000	1070	1130	107	113	82-131	5	20					
trans-1,2-Dichloroethene	ug/L	<1.3	1000	1000	1050	1080	105	108	75-135	3	20					
trans-1,3-Dichloropropene	ug/L	<1.1	1000	1000	871	966	87	97	70-130	10	20					
Trichloroethene	ug/L	<1.7	1000	1000	1030	1090	103	109	70-130	6	20					
Trichlorofluoromethane	ug/L	<0.92	1000	1000	980	1060	98	106	76-150	8	20					
Vinyl chloride	ug/L	<0.88	1000	1000	1040	1080	104	108	56-143	3	20					
4-Bromofluorobenzene (S)	%						99	97	61-130							
Dibromofluoromethane (S)	%						102	105	67-130							
Toluene-d8 (S)	%						103	102	70-130							

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JULSON
Pace Project No.: 40161821

QC Batch: 276285 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40161821001, 40161821002, 40161821003, 40161821004, 40161821005, 40161821006

METHOD BLANK: 1624956 Matrix: Water
Associated Lab Samples: 40161821001, 40161821002, 40161821003, 40161821004, 40161821005, 40161821006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	12/06/17 10:21	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	12/06/17 10:21	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	12/06/17 10:21	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	12/06/17 10:21	
1,1-Dichloroethane	ug/L	<0.24	1.0	12/06/17 10:21	
1,1-Dichloroethene	ug/L	<0.41	1.0	12/06/17 10:21	
1,1-Dichloropropene	ug/L	<0.44	1.0	12/06/17 10:21	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	12/06/17 10:21	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	12/06/17 10:21	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	12/06/17 10:21	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	12/06/17 10:21	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	12/06/17 10:21	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	12/06/17 10:21	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	12/06/17 10:21	
1,2-Dichloroethane	ug/L	<0.17	1.0	12/06/17 10:21	
1,2-Dichloropropane	ug/L	<0.23	1.0	12/06/17 10:21	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	12/06/17 10:21	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	12/06/17 10:21	
1,3-Dichloropropane	ug/L	<0.50	1.0	12/06/17 10:21	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	12/06/17 10:21	
2,2-Dichloropropane	ug/L	<0.48	1.0	12/06/17 10:21	
2-Chlorotoluene	ug/L	<0.50	1.0	12/06/17 10:21	
4-Chlorotoluene	ug/L	<0.21	1.0	12/06/17 10:21	
Benzene	ug/L	<0.50	1.0	12/06/17 10:21	
Bromobenzene	ug/L	<0.23	1.0	12/06/17 10:21	
Bromochloromethane	ug/L	<0.34	1.0	12/06/17 10:21	
Bromodichloromethane	ug/L	<0.50	1.0	12/06/17 10:21	
Bromoform	ug/L	<0.50	1.0	12/06/17 10:21	
Bromomethane	ug/L	<2.4	5.0	12/06/17 10:21	
Carbon tetrachloride	ug/L	<0.50	1.0	12/06/17 10:21	
Chlorobenzene	ug/L	<0.50	1.0	12/06/17 10:21	
Chloroethane	ug/L	<0.37	1.0	12/06/17 10:21	
Chloroform	ug/L	<2.5	5.0	12/06/17 10:21	
Chloromethane	ug/L	<0.50	1.0	12/06/17 10:21	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	12/06/17 10:21	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	12/06/17 10:21	
Dibromochloromethane	ug/L	<0.50	1.0	12/06/17 10:21	
Dibromomethane	ug/L	<0.43	1.0	12/06/17 10:21	
Dichlorodifluoromethane	ug/L	<0.22	1.0	12/06/17 10:21	
Diisopropyl ether	ug/L	<0.50	1.0	12/06/17 10:21	
Ethylbenzene	ug/L	<0.50	1.0	12/06/17 10:21	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JULSON
Pace Project No.: 40161821

METHOD BLANK: 1624956 Matrix: Water
Associated Lab Samples: 40161821001, 40161821002, 40161821003, 40161821004, 40161821005, 40161821006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	12/06/17 10:21	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	12/06/17 10:21	
m&p-Xylene	ug/L	<1.0	2.0	12/06/17 10:21	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	12/06/17 10:21	
Methylene Chloride	ug/L	<0.23	1.0	12/06/17 10:21	
n-Butylbenzene	ug/L	<0.50	1.0	12/06/17 10:21	
n-Propylbenzene	ug/L	<0.50	1.0	12/06/17 10:21	
Naphthalene	ug/L	<2.5	5.0	12/06/17 10:21	
o-Xylene	ug/L	<0.50	1.0	12/06/17 10:21	
p-Isopropyltoluene	ug/L	<0.50	1.0	12/06/17 10:21	
sec-Butylbenzene	ug/L	<2.2	5.0	12/06/17 10:21	
Styrene	ug/L	<0.50	1.0	12/06/17 10:21	
tert-Butylbenzene	ug/L	<0.18	1.0	12/06/17 10:21	
Tetrachloroethene	ug/L	<0.50	1.0	12/06/17 10:21	
Toluene	ug/L	<0.50	1.0	12/06/17 10:21	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	12/06/17 10:21	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	12/06/17 10:21	
Trichloroethene	ug/L	<0.33	1.0	12/06/17 10:21	
Trichlorofluoromethane	ug/L	<0.18	1.0	12/06/17 10:21	
Vinyl chloride	ug/L	<0.18	1.0	12/06/17 10:21	
4-Bromofluorobenzene (S)	%	90	61-130	12/06/17 10:21	
Dibromofluoromethane (S)	%	109	67-130	12/06/17 10:21	
Toluene-d8 (S)	%	96	70-130	12/06/17 10:21	

LABORATORY CONTROL SAMPLE: 1624957

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.7	107	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	52.0	104	70-130	
1,1,2-Trichloroethane	ug/L	50	52.9	106	70-130	
1,1-Dichloroethane	ug/L	50	46.6	93	71-132	
1,1-Dichloroethene	ug/L	50	47.4	95	75-130	
1,2,4-Trichlorobenzene	ug/L	50	45.7	91	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	50.9	102	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	55.3	111	70-130	
1,2-Dichlorobenzene	ug/L	50	52.6	105	70-130	
1,2-Dichloroethane	ug/L	50	50.8	102	70-131	
1,2-Dichloropropane	ug/L	50	53.2	106	80-120	
1,3-Dichlorobenzene	ug/L	50	51.3	103	70-130	
1,4-Dichlorobenzene	ug/L	50	53.0	106	70-130	
Benzene	ug/L	50	50.4	101	73-145	
Bromodichloromethane	ug/L	50	53.9	108	70-130	
Bromoform	ug/L	50	54.0	108	67-130	
Bromomethane	ug/L	50	27.8	56	26-128	

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QUALITY CONTROL DATA

Project: JULSON
Pace Project No.: 40161821

LABORATORY CONTROL SAMPLE: 1624957

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	51.8	104	70-133	
Chlorobenzene	ug/L	50	52.3	105	70-130	
Chloroethane	ug/L	50	41.7	83	58-120	
Chloroform	ug/L	50	50.7	101	80-121	
Chloromethane	ug/L	50	33.0	66	40-127	
cis-1,2-Dichloroethene	ug/L	50	47.8	96	70-130	
cis-1,3-Dichloropropene	ug/L	50	48.8	98	70-130	
Dibromochloromethane	ug/L	50	53.1	106	70-130	
Dichlorodifluoromethane	ug/L	50	34.5	69	20-135	
Ethylbenzene	ug/L	50	51.3	103	87-129	
Isopropylbenzene (Cumene)	ug/L	50	54.1	108	70-130	
m&p-Xylene	ug/L	100	106	106	70-130	
Methyl-tert-butyl ether	ug/L	50	50.5	101	66-143	
Methylene Chloride	ug/L	50	47.1	94	70-130	
o-Xylene	ug/L	50	53.5	107	70-130	
Styrene	ug/L	50	53.4	107	70-130	
Tetrachloroethene	ug/L	50	49.4	99	70-130	
Toluene	ug/L	50	51.9	104	82-130	
trans-1,2-Dichloroethene	ug/L	50	46.0	92	75-132	
trans-1,3-Dichloropropene	ug/L	50	46.7	93	70-130	
Trichloroethene	ug/L	50	51.3	103	70-130	
Trichlorofluoromethane	ug/L	50	49.9	100	76-133	
Vinyl chloride	ug/L	50	40.9	82	57-136	
4-Bromofluorobenzene (S)	%			103	61-130	
Dibromofluoromethane (S)	%			101	67-130	
Toluene-d8 (S)	%			96	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: JULSON
Pace Project No.: 40161821

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.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

P4 Sample field preservation does not meet EPA or method recommendations for this analysis.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JULSON

Pace Project No.: 40161821

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40161821001	MW-1	EPA 6010	276346		
40161821002	MW-2	EPA 6010	276773		
40161821003	MW-3	EPA 6010	276773		
40161821004	MW-4	EPA 6010	276773		
40161821005	MW-5A	EPA 6010	276773		
40161821006	MW-5B	EPA 6010	276773		
40161821001	MW-1	EPA 8260	276285		
40161821002	MW-2	EPA 8260	276285		
40161821003	MW-3	EPA 8260	276285		
40161821004	MW-4	EPA 8260	276285		
40161821005	MW-5A	EPA 8260	276285		
40161821006	MW-5B	EPA 8260	276285		
40161821008	TB	EPA 8260	276249		

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Sample Condition Upon Receipt

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

Project # WO#: 40161821

Client Name: Meridian Env

Courier: [X] Fed Ex [] UPS [] Client [] Pace Other: _____

Tracking #: 488747936594

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

Custody Seal on Samples Present: [] yes [X] no Seals intact: [] yes [] no

Packing Material: [X] Bubble Wrap [X] Bubble Bags [] None [] Other

Thermometer Used NA Type of Ice: Wet [X] Blue [] Dry [] None [X] Samples on ice, cooling process has begun

Cooler Temperature Uncorr: _____ /Corr: 201 Biological Tissue is Frozen: [] yes [] no

Temp Blank Present: [] yes [X] no

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

Person examining contents:
Date: 12/5/17
Initials: KS

Comments:

Table with 15 rows of inspection items and checkboxes. Includes handwritten notes like 'no time KJ 12/5/17 TB added by lab' and 'no MS/MSD KJ 12/5/17'.

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

Project Manager Review: _____ Date: 12-5-17

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034

Printed: 12/14/17 Page 1 of 1

Client: Pace Analytical Services Inc (GB)
Attn: Brian D Basten
1241 Bellevue Street
Green Bay, WI 54302 2156

NLS Project: 291512

NLS Customer: 94575

Fax: 920 469 8827 Phone: 800 736 2436

Project: 40161821 Julson

40161821007 NLS ID: 1032247

Matrix: DW

Collected: 12/03/17 00:00 Received: 12/06/17

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
SDWA Volatile Organics (VOCs) by EPA 524.2	see attached					12/11/17	EPA 524.2, Rev 4.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable

DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L

MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
R. T. Krueger
President

ANALYTICAL RESULTS: VOC's by EPA 524.2, Rev 4.1 - Water - Extended (Agilent5977E)

Page 1 of 2

Customer: Pace Analytical Services Inc (GB) NLS Project: 291512

Project Description: 40161821

Project Title: Julson

Template: AGIPACE Printed: 12/14/2017 12:05

Sample: 1032247 40161821007 Collected: 12/03/17 Analyzed: 12/11/17 - Analytes: 70

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.23	0.82		
Bromobenzene	ND	ug/L	1	0.26	0.91		
Bromochloromethane	ND	ug/L	1	0.34	1.2		
Bromodichloromethane	ND	ug/L	1	0.23	0.81		
Bromoform	ND	ug/L	1	0.21	0.74		
Bromomethane	ND	ug/L	1	0.37	1.3		
n-Butylbenzene	ND	ug/L	1	0.22	0.76		
sec-Butylbenzene	ND	ug/L	1	0.23	0.83		
tert-Butylbenzene	ND	ug/L	1	0.23	0.80		
Carbon Tetrachloride	ND	ug/L	1	0.22	0.76		
Chlorobenzene	ND	ug/L	1	0.24	0.86		
Chloroethane	ND	ug/L	1	1.5	5.2		
Chloroform	ND	ug/L	1	0.25	0.90		
Chloromethane	ND	ug/L	1	0.23	0.83		
2-Chlorotoluene	ND	ug/L	1	0.23	0.82		
4-Chlorotoluene	ND	ug/L	1	0.20	0.73		
Dibromochloromethane	ND	ug/L	1	0.17	0.61		
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.20	0.71		
1,2-Dibromoethane	ND	ug/L	1	0.22	0.76		
Dibromomethane	ND	ug/L	1	0.26	0.90		
1,2-Dichlorobenzene	ND	ug/L	1	0.25	0.87		
1,3-Dichlorobenzene	ND	ug/L	1	0.25	0.89		
1,4-Dichlorobenzene	ND	ug/L	1	0.28	1.0		
Dichlorodifluoromethane	ND	ug/L	1	0.22	0.77		
1,1-Dichloroethane	ND	ug/L	1	0.31	1.1		
1,2-Dichloroethane	ND	ug/L	1	0.25	0.90		
1,1-Dichloroethene	ND	ug/L	1	0.25	0.87		
cis-1,2-Dichloroethene	ND	ug/L	1	0.30	1.1		
trans-1,2-Dichloroethene	ND	ug/L	1	0.47	1.7		
1,2-Dichloropropane	ND	ug/L	1	0.23	0.81		
1,3-Dichloropropane	ND	ug/L	1	0.25	0.87		
2,2-Dichloropropane	ND	ug/L	1	0.15	0.54		
1,1-Dichloropropene	ND	ug/L	1	0.32	1.1		
cis-1,3-Dichloropropene	ND	ug/L	1	0.18	0.65		
trans-1,3-Dichloropropene	ND	ug/L	1	0.21	0.75		
Ethylbenzene	ND	ug/L	1	0.22	0.79		
Hexachlorobutadiene	ND	ug/L	1	0.24	0.83		
Isopropylbenzene	ND	ug/L	1	0.22	0.77		
p-Isopropyltoluene	ND	ug/L	1	0.22	0.78		
Methylene chloride	ND	ug/L	1	0.22	0.79		
Naphthalene	ND	ug/L	1	0.23	0.83		
n-Propylbenzene	ND	ug/L	1	0.22	0.78		
ortho-Xylene	ND	ug/L	1	0.20	0.70		
Styrene	ND	ug/L	1	0.21	0.73		
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.21	0.74		
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.20	0.72		
Tetrachloroethene	ND	ug/L	1	0.28	0.99		
Toluene	ND	ug/L	1	0.22	0.79		
1,2,3-Trichlorobenzene	ND	ug/L	1	0.24	0.85		
1,2,4-Trichlorobenzene	ND	ug/L	1	0.25	0.90		
1,1,1-Trichloroethane	ND	ug/L	1	0.32	1.1		
1,1,2-Trichloroethane	ND	ug/L	1	0.27	0.94		
Trichloroethene	ND	ug/L	1	0.30	1.1		

ANALYTICAL RESULTS: VOC's by EPA 524.2, Rev 4.1 - Water - Extended (Agilent5977E)

Customer: Pace Analytical Services Inc (GB) NLS Project: 291512

Project Description: 40161821

Project Title: Julson

Template: AGIPACE Printed: 12/14/2017 12:05

Sample: 1032247 40161821007 Collected: 12/03/17 Analyzed: 12/11/17 - Analytes: 70

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Trichlorofluoromethane	ND	ug/L	1	0.30	1.1		
1,2,3-Trichloropropane	ND	ug/L	1	0.30	1.0		
1,2,4-Trimethylbenzene	ND	ug/L	1	0.21	0.73		
1,3,5-Trimethylbenzene	ND	ug/L	1	0.22	0.77		
Vinyl chloride	ND	ug/L	1	0.20	0.70		
meta,para-Xylene	ND	ug/L	1	0.48	1.7		
MTBE	ND	ug/L	1	0.29	1.0		
Acetone	ND	ug/L	1	4.2	12		
Carbon disulfide	ND	ug/L	1	0.27	0.96		
Vinyl Acetate	ND	ug/L	1	0.39	1.4		
Methyl ethyl ketone	ND	ug/L	1	0.71	2.5		
4-Methyl-2-Pentanone	ND	ug/L	1	0.46	1.6		
2-Hexanone	ND	ug/L	1	0.44	1.6		
Trans 1,4-dichloro 2-butene	ND	ug/L	1	0.36	1.3		
Methyl methacrylate	ND	ug/L	1	0.48	1.7		
Ethyl methacrylate	ND	ug/L	1	0.20	0.72		
Acrylonitrile	ND	ug/L	1	0.62	2.2		
4-Bromofluorobenzene (SURR)	94%						S
1,2-Dichlorobenzene - d4 (SURR)	97%						S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.