

**From:** Marcus D Byker <Marcus.Byker@ramboll.com>  
**Sent:** Monday, January 13, 2020 9:01 PM  
**To:** Brian Miller (bmiller@marinette.wi.us)  
**Cc:** Steve Genisot (sgenisot@marinette.wi.us); Krueger, Sarah E - DNR; Gielniewski, Margaret <gielniewski.margaret@epa.gov> (gielniewski.margaret@epa.gov); Dombrowski, Frank J  
**Subject:** RE: WPS Marinette MGP - Notification of Recent Sampling Results  
**Attachments:** WPSC January 2020 Notification City of Marinette Letter.pdf

Brian,

On behalf of Frank Dombrowski with Wisconsin Public Service Corporation, attached is a copy of the results of the recent groundwater monitoring that took place at the former WPS Marinette MGP site. A hard copy is being sent to your attention via FedEx. Please feel free to reach Frank at 414-221-2156 with any questions or concerns.

Kind Regards,

**Marcus D. Byker, PE**

Managing Engineer

M 616-340-8982  
[marcus.byker@ramboll.com](mailto:marcus.byker@ramboll.com)

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Wisconsin Public Service Corporation

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Green Bay, WI 54307-9001

[www.wisconsinpublicservice.com](http://www.wisconsinpublicservice.com)

Mr. Brian Miller  
City of Marinette  
1905 Hall Avenue  
Marinette, WI, 54143

January 13, 2020  
(73068)

RE: Recent Sampling Results

**WPSC's Former Marinette MGP Site, 1603 Ely Street, BRRTS# 0238000047  
Marinette, Wisconsin**

Dear Mr. Miller,

WEC Business Services, LLC (WBS), managing the Wisconsin Public Service Corporation (WPSC) former manufactured gas plant site at 1603 Ely Street, is providing groundwater samples results collected as part of semi-annual monitoring from locations MW03R, MW05, MW302-MW305, MW307R, MW308, MW310, MW311, MW313, and P302-P305 collected between October 21 and 22, 2019. Please note that the two wells along the shoreline (MW01R and MW312) could not be sampled this round as wells were observed to be in standing water resulting from a high river level. Wisconsin Administrative Code Chapter NR716.14 requires responsible parties (WPSC for the above mentioned site) to report sampling results to the property owner, and occupant, as applicable.

Results of the sampling are summarized in the attached and are generally consistent with previous sampling activities. This attachment includes a summary table of the results compared to State standards. Copies of the relevant portions of the associated laboratory report and a figure showing the locations of samples collected on your property are also included. The results will be presented in the future Remedial Design Report.

We appreciate your cooperation as sampling progresses. If you need additional information, please contact Sarah Krueger from the WDNR at 920-662-5443 or myself at 414-221-2156.

Sincerely,

A handwritten signature in black ink, appearing to read 'Frank Dombrowski', is written over a light blue horizontal line.

Frank Dombrowski  
Principal Environmental Consultant  
WEC Business Services – Environmental Dept.

Enc: Figure 1. Monitoring Well Locations City of Marinette  
Table 1. Groundwater Analytical Results for the City of Marinette  
Laboratory Data Report 40197837\_frc

CC: USEPA RPM – Margaret Gielniewski (email only)  
WDNR PM – Kevin McKnight (email and hard copy)  
City of Marinette – Steve Genisot, Warren Howard



## **RECENT SAMPLING RESULTS**

**WPSC Former Marinette MGP Site  
1603 Ely Street, Marinette, Wisconsin  
WDNR BRRS Activity # 02-38-000047**

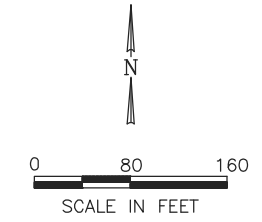
## FIGURES

Jun 21, 2015 1:52pm PLOTTED BY: ddudd SAVED BY: ddudd  
 I:\ACADData\Projects\1549\Marinette\17-5 RI Report Rev\1549-175-B06.dwg -Layout1  
 XREFS: Y:\ACADData\Projects\1549\Marinette\17-5 RI Report Rev\1549-175-Base 2.dwg



	MONITORING WELL
	PIEZOMETER
	GAS LINE
	WATER LINE
	ELECTRICAL LINE
	OVERHEAD ELECTRIC LINE
	SANITARY SEWER LINE
	STORM SEWER LINE
	UNDERGROUND ELECTRIC LINE
	FORMER SLOUGH
	FORMER MGP PROPERTY LINE (1923)
	FORMER MGP STRUCTURE
	EXISTING STRUCTURE

**NOTE:**  
 SAMPLING LOCATIONS IN BLUE WERE COMPLETED AS PART OF REMEDIAL INVESTIGATION ACTIVITIES IN 2012/2013/2014.



- SOURCE NOTES:**
- THIS DRAWING WAS DEVELOPED FROM A MAP BY THE CITY OF MARINETTE.
  - PORTIONS OF THE DRAWING ARE FROM A DIGITAL FILE FROM STS CONSULTANTS, LTD. CONSULTING ENGINEERS, GREEN BAY, WISCONSIN, PROJECT NUMBER 26936, REVISED JANUARY 2001. HYDROGRAPHIC SURVEY OF RIVER WAS PERFORMED BY AYRES AND ASSOCIATES ON JULY 24-26, 2001. VERTICAL CONTROL IS U.S.G.S. DATUM. BUILDING AND STREET LOCATIONS NORTH OF RAILROAD TRACKS WERE SUPPLIED BY MARINETTE MARINE CORPORATION.
  - PORTIONS OF THIS DRAWING ARE FROM HYDRO-SEARCH DRAWING.
  - EXISTING STRUCTURES AND UTILITIES FROM FOTH & VAN DYKE ENGINEERS/ARCHITECTS, GRADING PLAN, DIGITAL FILE 7m755c06.DWG, RECORD DRAWING REVISIONS 2/22/90 AND FROM SMET CONSTRUCTION SERVICES PDF DRAWING SET "MARINETTE MARINE BLDG 32 OUTFITTING", SHEET C1.1, DATED APRIL 24, 2012.
  - WELL LOCATIONS FROM A SURVEY BY WPSC DATED OCTOBER 8, 2003, REVISED OCTOBER 31, 2003.
  - VERTICAL CONTROL IS NAVD88 DATUM
  - BRICK INTERCEPTOR SEWER REPLACEMENT TAKEN FROM DRAWING BY AYRES ASSOCIATES, GREEN BAY, WISCONSIN, JOB NO. 16-0189.10, DRAWING NO. P101, SHEET NO. 7, DATED 3/14/03.
  - MONITORING WELLS MW2R, MW3R, MW307R INSTALLED OCTOBER 2004 AND MW308, MW310, P305 INSTALLED JUNE 2004. SURVEYED BY WPSC IN JANUARY 2005. (NAVD88, MARINETTE COUNTY COORDINATES).
  - POSTORINO UST'S WERE IDENTIFIED IN AYRES ASSOCIATES SITE ASSESSMENT AND REMEDIAL ACTION OPTIONS REPORT, CITY OF MARINETTE PROPERTY 500 MANN STREET MARINETTE WISCONSIN 54143 DATED AUGUST 2010.
  - BOOM LANDING SITE WAS DEVELOPED FROM A SURVEY DONE BY WISCONSIN PUBLIC SERVICE BY KJR BOOM LANDING SITE FEATURES DEVELOPED FROM A SURVEY ON 08/14/12, DRAWING "BOOM LANDING 8\_12". THE CHANNEL LIMITS AND PORTIONS OF THE SHORELINE ARE FROM U.S. ARMY CORPS OF ENGINEERS DRAWING "CONDITION OF CHANNEL-SEP. 2008", SHEET 4 OF 4.
  - HORIZONTAL DATUM IS MARINETTE COUNTY COORDINATE SYSTEM, UNITS=US FOOT.
  - SOME OFF-SITE UPLAND FEATURES DIGITIZED FROM BING MAPS AERIAL-© 2012 MICROSOFT CORPORATION.
  - BM-SG IS LOCATED ON TOP OF SHEETPILE WALL EAST OF BOAT RAMP.
  - SAMPLING LOCATIONS SB352 THROUGH SB370 COLLECTED BY NRT, OCTOBER 2014.

<b>MONITORING WELL LOCATIONS          CITY OF MARINETTE</b>	DRAWN BY: DMD	DATE: 11/13/14
	CHECKED BY: NDK	DATE: 11/24/14
	APPROVED BY: BGH	DATE: 01/21/15
DRAWING NO: 1549-175-B06		REFERENCE:
<b>REMEDIAL INVESTIGATION REPORT - REVISION 2          FORMER MARINETTE MGP SITE          WISCONSIN PUBLIC SERVICE CORPORATION          MARINETTE, WISCONSIN</b>		
PROJECT NO. 1549/17.5		
FIGURE NO. 1		

## **TABLES**

**Table 1. Groundwater Analytical Results for the City of Marinette**

October 2019 Sample Results Notification  
 Wisconsin Public Service Corporation - Former Marinette Manufactured Gas Plant  
 Marinette, Wisconsin  
 BRRTS# 0238000047  
 CERCLIS ID -WIN000509952

9-Digit Code	Station Name	Sample Date	BTEX		BTEX		BTEX		BTEX		BTEX		PAH		PAH		PAH		PAH		PAH		PAH		PAH									
			Benzene	Ethylbenzene	Toluene	Xylene, o	Xylenes, m + p	Xylenes, Total	Anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene																
Reporting Units:			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L								
			Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag								
<b>WI Groundwater ES:</b>			<b>5</b>		<b>700</b>		<b>800</b>		<b>NS</b>		<b>NS</b>		<b>2,000</b>		<b>3,000</b>		<b>0.2</b>		<b>0.2</b>		<b>NS</b>		<b>0.2</b>		<b>400</b>		<b>400</b>		<b>100</b>		<b>NS</b>		<b>250</b>	
<b>WI Groundwater PAL:</b>			<u>0.5</u>		<u>140</u>		<u>160</u>		<u>NS</u>		<u>NS</u>		<u>400</u>		<u>600</u>		<u>0.02</u>		<u>0.02</u>		<u>NS</u>		<u>0.02</u>		<u>80</u>		<u>80</u>		<u>10</u>		<u>NS</u>		<u>50</u>	
102219012	MW03R	10/22/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	0.038	J	<u>0.057</u>		<u>0.10</u>		0.070		<u>0.097</u>		0.088		<0.0081	U	0.022	J	0.028	J	0.097	
102219008	MW05	10/22/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	<0.012	U	<0.012	U	<0.0064	U	<0.0076	U	<0.015	U	<0.012	U	<0.0090	U	<0.021	U	<0.015	U	<0.0086	U
102219009	MW05-Dup	10/22/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	<0.011	U	<0.011	U	<0.0061	U	<0.0072	U	<0.014	U	<0.011	U	<0.0085	U	<0.020	U	<0.015	U	<0.0081	U
102119003	MW302	10/21/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	0.081		<b>0.32</b>		<b>0.30</b>		0.23		<b>0.25</b>		0.25		0.0099	J	0.041	J	0.031	J	0.27	
102119005	MW303	10/21/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	0.032	J	<0.011	U	<u>0.039</u>		0.031	J	<u>0.032</u>	J	0.020	J	<0.0084	U	<0.019	U	<0.015	U	0.043	
102119002	MW304	10/21/2019	<b>11.7</b>		1.3		0.47	J	1.6		0.81	J	2.4	J	0.078		<0.011	U	<0.0060	U	<0.0071	U	<0.014	U	0.021	J	0.073		2.8		0.028	J	0.014	J
102119001	MW305	10/21/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	0.024	J	<0.010	U	<0.0056	U	<0.0066	U	<0.013	U	<0.010	U	<0.0077	U	0.025	J	<0.013	U	<0.0074	U
102219016	MW307R	10/22/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	0.15		<u>0.052</u>	J	<u>0.076</u>		0.046		<u>0.13</u>		0.32		0.41		0.067	J	0.40		0.35	
102219011	MW308	10/22/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	<0.010	U	<0.010	U	0.0062	J	<0.0065	U	0.013	J	0.012	J	<0.0077	U	<0.018	U	<0.013	U	0.012	J
102219017	MW310	10/27/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	0.020	J	<0.011	U	<0.0060	U	<0.0071	U	<0.014	U	0.026	J	0.077		<0.019	U	<0.015	U	0.022	J
102219018	MW310-Dup	10/22/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	0.021	J	<0.010	U	0.0071	J	<0.0066	U	<0.013	U	0.033	J	0.13		0.021	J	<0.014	U	0.036	J
102219019	MW311	10/22/2019	<b>101</b>		105		4.1	J	56.8		11.9		68.8		5.9		<0.45*	U	<0.24*	U	<0.29	U	<0.56*	U	2.3		22.5		<b>508</b>		20.0		2.2	
102119006	MW313	10/21/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	0.032	J	<u>0.044</u>	J	<u>0.073</u>		0.049		<u>0.088</u>		0.10		0.048		0.023	J	0.021	J	0.10	
102119004	P302	10/21/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	<0.011	U	<0.011	U	<0.0060	U	<0.0071	U	<0.014	U	<0.011	U	<0.0084	U	<0.019	U	<0.015	U	<0.0081	U
102219013	P303	10/22/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	0.012	J	<0.010	U	0.0083	J	<0.0067	U	0.019	J	0.012	J	<0.0079	U	<0.018	U	<0.014	U	0.016	J
102219015	P304	10/22/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	<0.011	U	<0.011	U	0.0094	J	0.013	J	<u>0.029</u>	J	0.040	J	<0.0083	U	<0.019	U	0.024	J	0.029	J
102219010	P305	10/22/2019	<0.25	U	<0.22	U	<0.17	U	<0.26	U	<0.47	U	<1.5	U	0.043	J	0.014	J	<u>0.029</u>	J	0.017	J	<u>0.045</u>	J	0.40		0.061		<0.020	U	0.055	J	0.39	

Notes:  
**Bold** concentration that attains or exceeds WDNR ES  
Underlined concentration that attains or exceeds WDNR PAL  
 \* = Level of Detection (LOD) meets or exceeds the PAL and/or the ES Groundwater Criteria

< = Concentration is less than the Limit of Detection (LOD)  
 µg/L = micrograms per liter  
 BTEX = Benzene, Toluene, Ethylbenzene and Xylene  
 Dup = Quality Control Field Duplicate Sample  
 ES = Enforcement Standard  
 J = Concentration Estimated  
 NO2 + NO3 = nitrite plus nitrate  
 NS = No Standard  
 PAH = Polycyclic Aromatic Hydrocarbon  
 PAL = Preventive Action Limit  
 U = Concentration was not detected above the reported limit

Lab comments, additional data qualifiers and definitions can be found in associated laboratory reports.  
 PAL and ES from WI Administrative Code NR 140 groundwater quality standard revised effective February 2017

**Table 1. Groundwater Analytical Results for the City of Marinette**

October 2019 Sample Results Notification  
 Wisconsin Public Service Corporation - Former Marinette Manufactured Gas Plant  
 Marinette, Wisconsin  
 BRRTS# 0238000047  
 CERCLIS ID -WIN000509952

9-Digit Code	Station Name	Sample Date	Metal		Metal		Metal		Metal		Metal		Metal		Metal		Inorganic		Inorganic		Inorganic		Organic					
			Aluminum, Dissolved	Antimony, Dissolved	Copper, Dissolved	Iron, Dissolved	Manganese, Dissolved	Nickel, Dissolved	Silver, Dissolved	Vanadium, Dissolved	Zinc, Dissolved	Alkalinity, Total	Nitrogen, NO2 + NO3, Total	Sulfate, Total	Methane													
Reporting Units:			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L					
			Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag				
<b>WI Groundwater ES:</b>			<b>200</b>		<b>6</b>		<b>1,300</b>		<b>300</b>		<b>300</b>		<b>100</b>		<b>50</b>		<b>30</b>		<b>5,000</b>		<b>NS</b>		<b>10,000</b>		<b>250,000</b>		<b>NS</b>	
<b>WI Groundwater PAL:</b>			<u>40</u>		<u>1.2</u>		<u>130</u>		<u>150</u>		<u>60</u>		<u>20</u>		<u>10</u>		<u>6</u>		<u>2,500</u>		<u>NS</u>		<u>2,000</u>		<u>125,000</u>		<u>NS</u>	
102219012	MW03R	10/22/2019	<117*	U	0.77	J	7.7		<116	U	<b>383</b>		2.1		<0.25	U	1.9	J	<20.7	U	221,000		390		18,100		239	
102219008	MW05	10/22/2019	<117*	U	<0.30	U	<2.2	U	<116	U	<u>284</u>		0.87	J	<0.25	U	<0.63	U	<20.7	U	260,000		<u>3,900</u>		70,900		<0.66	U
102219009	MW05-Dup	10/22/2019	<117*	U	<0.30	U	2.4	J	<116	U	<b>312</b>		1.1	J	<0.25	U	<0.63	U	<20.7	U	262,000		<u>3,900</u>		67,100		<0.66	U
102119003	MW302	10/21/2019	<117*	U	<0.30	U	5.2	J	<b>546</b>		<u>107</u>		4.2		<0.25	U	0.68	J	<20.7	U	295,000		<u>5,400</u>		124,000		<0.66	U
102119005	MW303	10/21/2019	<117*	U	0.37	J	<2.2	U	<b>2,240</b>		<b>5,100</b>		5.6		<0.25	U	1.1	J	<20.7	U	454,000		<95	U	123,000		149	
102119002	MW304	10/21/2019	<117*	U	1.0	J	<2.2	U	<b>987</b>		<b>1,460</b>		3.5		<0.25	U	1.3	J	<20.7	U	476,000		<95	U	37,700		1,630	
102119001	MW305	10/21/2019	<117*	U	0.34	J	3.1	J	<b>551</b>		<2.4	U	0.94	J	<0.25	U	<0.63	U	<20.7	U	310,000		<u>7,300</u>		<u>157,000</u>		<0.66	U
102219016	MW307R	10/22/2019	<117*	U	<0.30	U	<2.2	U	<b>16,400</b>		<u>170</u>		<0.57	U	<0.25	U	<0.63	U	<20.7	U	212,000	J	<95	U	<5,000	U	7,090	
102219011	MW308	10/22/2019	<117*	U	0.36	J	23.0		<b>810</b>		<b>4,860</b>		<u>27.0</u>		<0.25	U	<0.63	U	172		865,000		<95	U	<b>299,000</b>		468	
102219017	MW310	10/27/2019	<117*	U	0.40	J	<2.2	U	<b>3,440</b>		<b>732</b>		1.4	J	<0.25	U	1.3	J	<20.7	U	410,000		<95	U	64,400		583	
102219018	MW310-Dup	10/22/2019	<117*	U	0.40	J	<2.2	U	<b>3,890</b>		<b>724</b>		1.1	J	<0.25	U	1.6	J	<20.7	U	391,000		<95	U	57,700		254	
102219019	MW311	10/22/2019	<117*	U	<0.30	U	<2.2	U	<b>32,800</b>		<b>720</b>		0.93	J	<0.25	U	2.3		<20.7	U	726,000		<95	U	<5,000	U	9,020	
102119006	MW313	10/21/2019	<117*	U	<0.30	U	<2.2	U	<b>13,600</b>		<b>835</b>		4.4		<0.25	U	3.5		<20.7	U	397,000		<95	U	24,100		5,130	
102119004	P302	10/21/2019	<117*	U	<0.30	U	<2.2	U	<b>2,780</b>		<b>399</b>		<0.57	U	<0.25	U	1.2	J	<20.7	U	263,000		<95	U	69,100		26.7	
102219013	P303	10/22/2019	<117*	U	<0.30	U	<2.2	U	<116	U	3.1	J	0.60	J	<0.25	U	<0.63	U	<20.7	U	148,000	J	<95	U	<b>857,000</b>		<0.66	U
102219015	P304	10/22/2019	<117*	U	<0.30	U	2.2	J	<b>1,270</b>		<u>167</u>		1.8	J	<0.25	U	0.74	J	<20.7	U	--		1,600		--		<0.66	U
102219010	P305	10/22/2019	<117*	U	<0.30	U	<2.2	U	<b>771</b>		<b>770</b>		1.7	J	<0.25	U	1.2	J	25.9	J	328,000		<95	U	27,000		22.0	

[O:CMD 12/20/19, C:CMD 12/20/2019, QA:MDB 1/8/2020]

Notes:  
**Bold** concentration that attains or exceeds WDNR ES  
Underlined concentration that attains or exceeds WDNR PAL  
 \* = Level of Detection (LOD) meets or exceeds the PAL and/or the ES Groundwater Criteria

< = Concentration is less than the Limit of Detection (LOD)  
 µg/L = micrograms per liter  
 BTEX = Benzene, Toluene, Ethylbenzene and Xylene  
 Dup = Quality Control Field Duplicate Sample  
 ES = Enforcement Standard  
 J = Concentration Estimated  
 NO2 + NO3 = nitrite plus nitrate  
 NS = No Standard  
 PAH = Polycyclic Aromatic Hydrocarbon  
 PAL = Preventive Action Limit  
 U = Concentration was not detected above the reported limit

Lab comments, additional data qualifiers and definitions can be found in associated laboratory reports.  
 PAL and ES from WI Administrative Code NR 140 groundwater quality standard revised effective February 2017



# **LABORATORY DATA REPORTS**

November 06, 2019

Brian Hennings  
Ramboll  
234 W. Florida St, 5th Floor  
Milwaukee, WI 53204

RE: Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

Dear Brian Hennings:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2019. 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,



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

Enclosures

cc: NRT Data, OBG



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

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### 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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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40197837001	102119001	Water	10/21/19 13:11	10/23/19 12:45
40197837002	102119002	Water	10/21/19 14:18	10/23/19 12:45
40197837003	102119003	Water	10/21/19 16:37	10/23/19 12:45
40197837004	102119004	Water	10/21/19 17:15	10/23/19 12:45
40197837005	102119005	Water	10/21/19 17:59	10/23/19 12:45
40197837006	102119006	Water	10/21/19 18:38	10/23/19 12:45
40197837007	102119007	Water	10/21/19 18:50	10/23/19 12:45
40197837008	102219008	Water	10/22/19 07:45	10/23/19 12:45
40197837009	102219009	Water	10/22/19 07:50	10/23/19 12:45
40197837010	102219010	Water	10/22/19 08:47	10/23/19 12:45
40197837011	102219011	Water	10/22/19 09:15	10/23/19 12:45
40197837012	102219012	Water	10/22/19 09:58	10/23/19 12:45
40197837013	102219013	Water	10/22/19 10:20	10/23/19 12:45
██████████	██████████	██████████	██████████	██████████
40197837015	102219015	Water	10/22/19 11:55	10/23/19 12:45
40197837016	102219016	Water	10/22/19 12:48	10/23/19 12:45
40197837017	102219017	Water	10/22/19 13:33	10/23/19 12:45
40197837018	102219018	Water	10/22/19 13:38	10/23/19 12:45
40197837019	102219019	Water	10/22/19 14:17	10/23/19 12:45
40197837020	102219020	Water	10/22/19 14:40	10/23/19 12:45
40197837021	102219021	Water	10/22/19 00:00	10/23/19 12:45

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### SAMPLE ANALYTE COUNT

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40197837001	102119001	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40197837002	102119002	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40197837003	102119003	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40197837004	102119004	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40197837005	102119005	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40197837006	102119006	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G

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### SAMPLE ANALYTE COUNT

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
<b>40197837007</b>	<b>102119007</b>	EPA 8260	LAP	9	PASI-G
<b>40197837008</b>	<b>102219008</b>	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
<b>40197837009</b>	<b>102219009</b>	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
<b>40197837010</b>	<b>102219010</b>	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
<b>40197837011</b>	<b>102219011</b>	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
<b>40197837012</b>	<b>102219012</b>	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40197837013	102219013	EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
		EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
40197837015	102219015	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
40197837016	102219016	EPA 353.2	DAW	1	PASI-G
		EPA 8015B Modified	ALD	1	PASI-G
40197837016	102219016	EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
		EPA 8015B Modified	ALD	1	PASI-G
40197837017	102219017	EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
		EPA 8015B Modified	ALD	1	PASI-G

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40197837018	102219018	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40197837019	102219019	EPA 8015B Modified	ALD	1	PASI-G
		EPA 6020	DS1, KXS	9	PASI-G
		EPA 8270 by HVI	TPO	12	PASI-G
		EPA 8260	LAP	9	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
		EPA 353.2	DAW	1	PASI-G
40197837020	102219020	EPA 8260	LAP	9	PASI-G
40197837021	102219021	EPA 8260	HNW	9	PASI-G

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

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**Method:** EPA 8015B Modified

**Description:** Methane, Ethane, Ethene GCV

**Client:** O'Brien & Gere Engineers, Inc Integrys WI

**Date:** November 06, 2019

**General Information:**

18 samples were analyzed for EPA 8015B Modified. 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.

**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: 338977

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40197837002

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

- MS (Lab ID: 1968874)
  - Methane
- MSD (Lab ID: 1968875)
  - Methane

QC Batch: 339649

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40197839001

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

- MS (Lab ID: 1972508)
  - Methane
- MSD (Lab ID: 1972509)
  - Methane

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

---

**Method:** EPA 6020

**Description:** 6020 MET ICPMS, Dissolved

**Client:** O'Brien & Gere Engineers, Inc Integrys WI

**Date:** November 06, 2019

### General Information:

18 samples were analyzed for EPA 6020. 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.

### Sample Preparation:

The samples were prepared in accordance with EPA 3010 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.

### 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.

### Additional Comments:

Analyte Comments:

QC Batch: 338681

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

- 102119001 (Lab ID: 40197837001)
  - Silver, Dissolved
  - Aluminum, Dissolved
  - Copper, Dissolved
  - Manganese, Dissolved
  - Nickel, Dissolved
  - Antimony, Dissolved
  - Vanadium, Dissolved
  - Zinc, Dissolved
- 102119002 (Lab ID: 40197837002)
  - Silver, Dissolved

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

---

**Method:** EPA 6020  
**Description:** 6020 MET ICPMS, Dissolved  
**Client:** O'Brien & Gere Engineers, Inc Integrys WI  
**Date:** November 06, 2019

Analyte Comments:

QC Batch: 338681

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

- 102119002 (Lab ID: 40197837002)
  - Aluminum, Dissolved
  - Copper, Dissolved
  - Antimony, Dissolved
  - Vanadium, Dissolved
  - Zinc, Dissolved
- 102119003 (Lab ID: 40197837003)
  - Silver, Dissolved
  - Aluminum, Dissolved
  - Copper, Dissolved
  - Antimony, Dissolved
  - Vanadium, Dissolved
  - Zinc, Dissolved
- 102119004 (Lab ID: 40197837004)
  - Silver, Dissolved
  - Aluminum, Dissolved
  - Copper, Dissolved
  - Nickel, Dissolved
  - Antimony, Dissolved
  - Vanadium, Dissolved
  - Zinc, Dissolved
- 102119005 (Lab ID: 40197837005)
  - Silver, Dissolved
  - Aluminum, Dissolved
  - Copper, Dissolved
  - Antimony, Dissolved
  - Vanadium, Dissolved
  - Zinc, Dissolved
- 102119006 (Lab ID: 40197837006)
  - Silver, Dissolved
  - Aluminum, Dissolved
  - Copper, Dissolved
  - Antimony, Dissolved
  - Zinc, Dissolved
- 102219008 (Lab ID: 40197837008)
  - Silver, Dissolved
  - Aluminum, Dissolved
  - Copper, Dissolved
  - Iron, Dissolved
  - Nickel, Dissolved
  - Antimony, Dissolved
  - Vanadium, Dissolved
  - Zinc, Dissolved

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## PROJECT NARRATIVE

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

---

**Method:** EPA 6020

**Description:** 6020 MET ICPMS, Dissolved

**Client:** O'Brien & Gere Engineers, Inc Integrys WI

**Date:** November 06, 2019

Analyte Comments:

QC Batch: 338681

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

- 102219009 (Lab ID: 40197837009)

- Silver, Dissolved
- Aluminum, Dissolved
- Copper, Dissolved
- Iron, Dissolved
- Nickel, Dissolved
- Antimony, Dissolved
- Vanadium, Dissolved
- Zinc, Dissolved

- 102219010 (Lab ID: 40197837010)

- Silver, Dissolved
- Aluminum, Dissolved
- Copper, Dissolved
- Nickel, Dissolved
- Antimony, Dissolved
- Vanadium, Dissolved
- Zinc, Dissolved

- 102219011 (Lab ID: 40197837011)

- Silver, Dissolved
- Aluminum, Dissolved
- Antimony, Dissolved
- Vanadium, Dissolved

- 102219012 (Lab ID: 40197837012)

- Silver, Dissolved
- Aluminum, Dissolved
- Iron, Dissolved
- Antimony, Dissolved
- Vanadium, Dissolved
- Zinc, Dissolved

- 102219013 (Lab ID: 40197837013)

- Silver, Dissolved
- Aluminum, Dissolved
- Copper, Dissolved
- Iron, Dissolved
- Manganese, Dissolved
- Nickel, Dissolved
- Antimony, Dissolved
- Vanadium, Dissolved
- Zinc, Dissolved

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

---

**Method:** EPA 6020

**Description:** 6020 MET ICPMS, Dissolved

**Client:** O'Brien & Gere Engineers, Inc Integrys WI

**Date:** November 06, 2019

Analyte Comments:

QC Batch: 338681

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

• [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

• 102219015 (Lab ID: 40197837015)

- Silver, Dissolved
- Aluminum, Dissolved
- Copper, Dissolved
- Nickel, Dissolved
- Antimony, Dissolved
- Vanadium, Dissolved
- Zinc, Dissolved

• 102219016 (Lab ID: 40197837016)

- Silver, Dissolved
- Aluminum, Dissolved
- Copper, Dissolved
- Nickel, Dissolved
- Antimony, Dissolved
- Vanadium, Dissolved
- Zinc, Dissolved

• 102219017 (Lab ID: 40197837017)

- Silver, Dissolved
- Aluminum, Dissolved
- Copper, Dissolved
- Nickel, Dissolved
- Antimony, Dissolved
- Vanadium, Dissolved
- Zinc, Dissolved

• 102219018 (Lab ID: 40197837018)

- Silver, Dissolved
- Aluminum, Dissolved
- Copper, Dissolved
- Nickel, Dissolved
- Antimony, Dissolved
- Vanadium, Dissolved
- Zinc, Dissolved

• 102219019 (Lab ID: 40197837019)

- Silver, Dissolved
- Aluminum, Dissolved
- Copper, Dissolved
- Nickel, Dissolved
- Antimony, Dissolved
- Zinc, Dissolved

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## PROJECT NARRATIVE

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

---

**Method:** EPA 8270 by HVI

**Description:** 8270 MSSV PAH by HVI

**Client:** O'Brien & Gere Engineers, Inc Integrys WI

**Date:** November 06, 2019

**General Information:**

18 samples were analyzed for EPA 8270 by HVI. 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.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3510 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.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

---

**Method:** EPA 8260

**Description:** 8260 MSV UST

**Client:** O'Brien & Gere Engineers, Inc Integrys WI

**Date:** November 06, 2019

**General Information:**

21 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.

**Additional Comments:**

Analyte Comments:

QC Batch: 338583

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

- 102219019 (Lab ID: 40197837019)
- Dibromofluoromethane (S)

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

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**Method:** EPA 300.0

**Description:** 300.0 IC Anions

**Client:** O'Brien & Gere Engineers, Inc Integrys WI

**Date:** November 06, 2019

**General Information:**

17 samples were analyzed for EPA 300.0. 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.

**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.

**Additional Comments:**

Analyte Comments:

QC Batch: 339094

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

- 102219016 (Lab ID: 40197837016)
  - Sulfate
- 102219019 (Lab ID: 40197837019)
  - Sulfate

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## PROJECT NARRATIVE

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

---

**Method:** EPA 310.2

**Description:** 310.2 Alkalinity

**Client:** O'Brien & Gere Engineers, Inc Integrys WI

**Date:** November 06, 2019

### General Information:

17 samples were analyzed for EPA 310.2. 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.

### 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: 339184

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40197837002

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1969895)
  - Alkalinity, Total as CaCO<sub>3</sub>
- MSD (Lab ID: 1969896)
  - Alkalinity, Total as CaCO<sub>3</sub>

QC Batch: 339465

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40197837013,40197839001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1971483)
  - Alkalinity, Total as CaCO<sub>3</sub>
- MSD (Lab ID: 1971484)
  - Alkalinity, Total as CaCO<sub>3</sub>

### Additional Comments:

Analyte Comments:

QC Batch: 339465

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

- 102219013 (Lab ID: 40197837013)
  - Alkalinity, Total as CaCO<sub>3</sub>
- 102219016 (Lab ID: 40197837016)
  - Alkalinity, Total as CaCO<sub>3</sub>

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## PROJECT NARRATIVE

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

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**Method:** EPA 353.2

**Description:** 353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> pres.

**Client:** O'Brien & Gere Engineers, Inc Integrys WI

**Date:** November 06, 2019

**General Information:**

18 samples were analyzed for EPA 353.2. 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.

**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.

**Additional Comments:**

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: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

**Sample: 102119001**      **Lab ID: 40197837001**      Collected: 10/21/19 13:11      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	<0.66	ug/L	2.8	0.66	1		10/29/19 08:13	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<117	ug/L	500	117	2	10/25/19 05:58	10/26/19 10:41	7429-90-5	D3
Antimony, Dissolved	0.34J	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 10:41	7440-36-0	D3
Copper, Dissolved	3.1J	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 10:41	7440-50-8	D3
Iron, Dissolved	551	ug/L	500	116	2	10/25/19 05:58	10/26/19 10:41	7439-89-6	
Manganese, Dissolved	<2.4	ug/L	8.1	2.4	2	10/25/19 05:58	10/28/19 23:27	7439-96-5	D3
Nickel, Dissolved	0.94J	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 10:41	7440-02-0	D3
Silver, Dissolved	<0.25	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 10:41	7440-22-4	D3
Vanadium, Dissolved	<0.63	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 10:41	7440-62-2	D3
Zinc, Dissolved	<20.7	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 10:41	7440-66-6	D3
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
Anthracene	0.024J	ug/L	0.051	0.010	1	10/24/19 11:30	10/25/19 16:25	120-12-7	
Benzo(a)pyrene	<0.010	ug/L	0.051	0.010	1	10/24/19 11:30	10/25/19 16:25	50-32-8	
Benzo(b)fluoranthene	<0.0056	ug/L	0.028	0.0056	1	10/24/19 11:30	10/25/19 16:25	205-99-2	
Benzo(g,h,i)perylene	<0.0066	ug/L	0.033	0.0066	1	10/24/19 11:30	10/25/19 16:25	191-24-2	
Chrysene	<0.013	ug/L	0.063	0.013	1	10/24/19 11:30	10/25/19 16:25	218-01-9	
Fluoranthene	<0.010	ug/L	0.052	0.010	1	10/24/19 11:30	10/25/19 16:25	206-44-0	
Fluorene	<0.0077	ug/L	0.039	0.0077	1	10/24/19 11:30	10/25/19 16:25	86-73-7	
Naphthalene	0.025J	ug/L	0.089	0.018	1	10/24/19 11:30	10/25/19 16:25	91-20-3	
Phenanthrene	<0.013	ug/L	0.067	0.013	1	10/24/19 11:30	10/25/19 16:25	85-01-8	
Pyrene	<0.0074	ug/L	0.037	0.0074	1	10/24/19 11:30	10/25/19 16:25	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	66	%	30-85		1	10/24/19 11:30	10/25/19 16:25	321-60-8	
Terphenyl-d14 (S)	91	%	10-120		1	10/24/19 11:30	10/25/19 16:25	1718-51-0	
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/24/19 20:54	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/24/19 20:54	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/24/19 20:54	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/24/19 20:54	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/24/19 20:54	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/24/19 20:54	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	88	%	70-130		1		10/24/19 20:54	1868-53-7	
Toluene-d8 (S)	96	%	70-130		1		10/24/19 20:54	2037-26-5	
4-Bromofluorobenzene (S)	95	%	70-130		1		10/24/19 20:54	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	157	mg/L	30.0	10.0	10		11/05/19 16:36	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	310	mg/L	47.7	14.3	1		10/30/19 14:04		

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

**Sample: 102119001**      **Lab ID: 40197837001**      Collected: 10/21/19 13:11      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
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**353.2 Nitrogen, NO2/NO3 pres.**      Analytical Method: EPA 353.2

Nitrogen, NO2 plus NO3	7.3	mg/L	0.25	0.095	1		11/01/19 11:25		
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**Sample: 102119002**      **Lab ID: 40197837002**      Collected: 10/21/19 14:18      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
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**Methane, Ethane, Ethene GCV**      Analytical Method: EPA 8015B Modified

Methane	1630	ug/L	28.0	6.6	10		10/29/19 11:31	74-82-8	M1
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**6020 MET ICPMS, Dissolved**      Analytical Method: EPA 6020      Preparation Method: EPA 3010

Aluminum, Dissolved	<117	ug/L	500	117	2	10/25/19 05:58	10/26/19 10:13	7429-90-5	D3
Antimony, Dissolved	1.0J	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 10:13	7440-36-0	D3
Copper, Dissolved	<2.2	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 10:13	7440-50-8	D3
Iron, Dissolved	987	ug/L	500	116	2	10/25/19 05:58	10/26/19 10:13	7439-89-6	
Manganese, Dissolved	1460	ug/L	40.5	12.2	10	10/25/19 05:58	10/28/19 23:00	7439-96-5	
Nickel, Dissolved	3.5	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 10:13	7440-02-0	
Silver, Dissolved	<0.25	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 10:13	7440-22-4	D3
Vanadium, Dissolved	1.3J	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 10:13	7440-62-2	D3
Zinc, Dissolved	<20.7	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 10:13	7440-66-6	D3

**8270 MSSV PAH by HVI**      Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510

Anthracene	0.078	ug/L	0.055	0.011	1	10/24/19 11:30	10/24/19 20:53	120-12-7	
Benzo(a)pyrene	<0.011	ug/L	0.055	0.011	1	10/24/19 11:30	10/24/19 20:53	50-32-8	
Benzo(b)fluoranthene	<0.0060	ug/L	0.030	0.0060	1	10/24/19 11:30	10/24/19 20:53	205-99-2	
Benzo(g,h,i)perylene	<0.0071	ug/L	0.036	0.0071	1	10/24/19 11:30	10/24/19 20:53	191-24-2	
Chrysene	<0.014	ug/L	0.069	0.014	1	10/24/19 11:30	10/24/19 20:53	218-01-9	
Fluoranthene	0.021J	ug/L	0.056	0.011	1	10/24/19 11:30	10/24/19 20:53	206-44-0	
Fluorene	0.073	ug/L	0.042	0.0084	1	10/24/19 11:30	10/24/19 20:53	86-73-7	
Naphthalene	2.8	ug/L	0.096	0.019	1	10/24/19 11:30	10/24/19 20:53	91-20-3	
Phenanthrene	0.028J	ug/L	0.073	0.015	1	10/24/19 11:30	10/24/19 20:53	85-01-8	
Pyrene	0.014J	ug/L	0.040	0.0081	1	10/24/19 11:30	10/24/19 20:53	129-00-0	

**Surrogates**

2-Fluorobiphenyl (S)	66	%	30-85		1	10/24/19 11:30	10/24/19 20:53	321-60-8	
Terphenyl-d14 (S)	102	%	10-120		1	10/24/19 11:30	10/24/19 20:53	1718-51-0	

**8260 MSV UST**      Analytical Method: EPA 8260

Benzene	11.7	ug/L	1.0	0.25	1		10/24/19 20:10	71-43-2	
Ethylbenzene	1.3	ug/L	1.0	0.22	1		10/24/19 20:10	100-41-4	
Toluene	0.47J	ug/L	5.0	0.17	1		10/24/19 20:10	108-88-3	
Xylene (Total)	2.4J	ug/L	3.0	1.5	1		10/24/19 20:10	1330-20-7	
m&p-Xylene	0.81J	ug/L	2.0	0.47	1		10/24/19 20:10	179601-23-1	
o-Xylene	1.6	ug/L	1.0	0.26	1		10/24/19 20:10	95-47-6	

**Surrogates**

Dibromofluoromethane (S)	90	%	70-130		1		10/24/19 20:10	1868-53-7	
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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

Sample: 102119002      Lab ID: 40197837002      Collected: 10/21/19 14:18      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
<i><b>Surrogates</b></i>									
Toluene-d8 (S)	96	%	70-130		1		10/24/19 20:10	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		10/24/19 20:10	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	<b>37.7</b>	mg/L	3.0	1.0	1		11/04/19 19:36	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	<b>476</b>	mg/L	238	71.5	5		10/30/19 14:04		M0
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	<b>&lt;0.095</b>	mg/L	0.25	0.095	1		11/01/19 11:25		

Sample: 102119003      Lab ID: 40197837003      Collected: 10/21/19 16:37      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	<b>&lt;0.66</b>	ug/L	2.8	0.66	1		10/29/19 08:27	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<b>&lt;117</b>	ug/L	500	117	2	10/25/19 05:58	10/26/19 10:55	7429-90-5	D3
Antimony, Dissolved	<b>&lt;0.30</b>	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 10:55	7440-36-0	D3
Copper, Dissolved	<b>5.2J</b>	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 10:55	7440-50-8	D3
Iron, Dissolved	<b>546</b>	ug/L	500	116	2	10/25/19 05:58	10/26/19 10:55	7439-89-6	
Manganese, Dissolved	<b>107</b>	ug/L	40.5	12.2	10	10/25/19 05:58	10/28/19 23:54	7439-96-5	
Nickel, Dissolved	<b>4.2</b>	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 10:55	7440-02-0	
Silver, Dissolved	<b>&lt;0.25</b>	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 10:55	7440-22-4	D3
Vanadium, Dissolved	<b>0.68J</b>	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 10:55	7440-62-2	D3
Zinc, Dissolved	<b>&lt;20.7</b>	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 10:55	7440-66-6	D3
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
Anthracene	<b>0.081</b>	ug/L	0.051	0.010	1	10/24/19 11:30	10/25/19 16:43	120-12-7	
Benzo(a)pyrene	<b>0.32</b>	ug/L	0.051	0.010	1	10/24/19 11:30	10/25/19 16:43	50-32-8	
Benzo(b)fluoranthene	<b>0.30</b>	ug/L	0.028	0.0056	1	10/24/19 11:30	10/25/19 16:43	205-99-2	
Benzo(g,h,i)perylene	<b>0.23</b>	ug/L	0.033	0.0066	1	10/24/19 11:30	10/25/19 16:43	191-24-2	
Chrysene	<b>0.25</b>	ug/L	0.063	0.013	1	10/24/19 11:30	10/25/19 16:43	218-01-9	
Fluoranthene	<b>0.25</b>	ug/L	0.052	0.010	1	10/24/19 11:30	10/25/19 16:43	206-44-0	
Fluorene	<b>0.0099J</b>	ug/L	0.039	0.0077	1	10/24/19 11:30	10/25/19 16:43	86-73-7	
Naphthalene	<b>0.041J</b>	ug/L	0.089	0.018	1	10/24/19 11:30	10/25/19 16:43	91-20-3	
Phenanthrene	<b>0.031J</b>	ug/L	0.067	0.013	1	10/24/19 11:30	10/25/19 16:43	85-01-8	
Pyrene	<b>0.27</b>	ug/L	0.037	0.0074	1	10/24/19 11:30	10/25/19 16:43	129-00-0	
<i><b>Surrogates</b></i>									
2-Fluorobiphenyl (S)	65	%	30-85		1	10/24/19 11:30	10/25/19 16:43	321-60-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

**Sample: 102119003**      **Lab ID: 40197837003**      Collected: 10/21/19 16:37      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
<i>Surrogates</i>									
Terphenyl-d14 (S)	89	%	10-120		1	10/24/19 11:30	10/25/19 16:43	1718-51-0	
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/24/19 21:16	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/24/19 21:16	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/24/19 21:16	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/24/19 21:16	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/24/19 21:16	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/24/19 21:16	95-47-6	
<i>Surrogates</i>									
Dibromofluoromethane (S)	91	%	70-130		1		10/24/19 21:16	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		10/24/19 21:16	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		10/24/19 21:16	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	124	mg/L	15.0	5.0	5		11/05/19 18:15	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	295	mg/L	95.4	28.6	2		10/30/19 14:06		
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	5.4	mg/L	0.25	0.095	1		11/01/19 11:27		

**Sample: 102119004**      **Lab ID: 40197837004**      Collected: 10/21/19 17:15      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	26.7	ug/L	2.8	0.66	1		10/29/19 08:34	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<117	ug/L	500	117	2	10/25/19 05:58	10/26/19 11:02	7429-90-5	D3
Antimony, Dissolved	<0.30	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 11:02	7440-36-0	D3
Copper, Dissolved	<2.2	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 11:02	7440-50-8	D3
Iron, Dissolved	2780	ug/L	500	116	2	10/25/19 05:58	10/26/19 11:02	7439-89-6	
Manganese, Dissolved	399	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 00:01	7439-96-5	
Nickel, Dissolved	<0.57	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 11:02	7440-02-0	D3
Silver, Dissolved	<0.25	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 11:02	7440-22-4	D3
Vanadium, Dissolved	1.2J	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 11:02	7440-62-2	D3
Zinc, Dissolved	<20.7	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 11:02	7440-66-6	D3

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

**Sample: 102119004**      **Lab ID: 40197837004**      Collected: 10/21/19 17:15      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
Anthracene	<0.011	ug/L	0.055	0.011	1	10/24/19 11:30	10/25/19 17:01	120-12-7	
Benzo(a)pyrene	<0.011	ug/L	0.055	0.011	1	10/24/19 11:30	10/25/19 17:01	50-32-8	
Benzo(b)fluoranthene	<0.0060	ug/L	0.030	0.0060	1	10/24/19 11:30	10/25/19 17:01	205-99-2	
Benzo(g,h,i)perylene	<0.0071	ug/L	0.036	0.0071	1	10/24/19 11:30	10/25/19 17:01	191-24-2	
Chrysene	<0.014	ug/L	0.069	0.014	1	10/24/19 11:30	10/25/19 17:01	218-01-9	
Fluoranthene	<0.011	ug/L	0.056	0.011	1	10/24/19 11:30	10/25/19 17:01	206-44-0	
Fluorene	<0.0084	ug/L	0.042	0.0084	1	10/24/19 11:30	10/25/19 17:01	86-73-7	
Naphthalene	<0.019	ug/L	0.096	0.019	1	10/24/19 11:30	10/25/19 17:01	91-20-3	
Phenanthrene	<0.015	ug/L	0.073	0.015	1	10/24/19 11:30	10/25/19 17:01	85-01-8	
Pyrene	<0.0081	ug/L	0.040	0.0081	1	10/24/19 11:30	10/25/19 17:01	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	68	%	30-85		1	10/24/19 11:30	10/25/19 17:01	321-60-8	
Terphenyl-d14 (S)	91	%	10-120		1	10/24/19 11:30	10/25/19 17:01	1718-51-0	
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/24/19 21:38	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/24/19 21:38	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/24/19 21:38	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/24/19 21:38	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/24/19 21:38	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/24/19 21:38	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	90	%	70-130		1		10/24/19 21:38	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		10/24/19 21:38	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		10/24/19 21:38	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	69.1	mg/L	15.0	5.0	5		11/05/19 18:29	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	263	mg/L	95.4	28.6	2		10/30/19 14:06		
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	<0.095	mg/L	0.25	0.095	1		11/01/19 11:29		

**Sample: 102119005**      **Lab ID: 40197837005**      Collected: 10/21/19 17:59      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	149	ug/L	2.8	0.66	1		10/29/19 08:40	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<117	ug/L	500	117	2	10/25/19 05:58	10/26/19 11:22	7429-90-5	D3

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## ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

**Sample: 102119005**      **Lab ID: 40197837005**      Collected: 10/21/19 17:59      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020    Preparation Method: EPA 3010									
Antimony, Dissolved	0.37J	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 11:22	7440-36-0	D3
Copper, Dissolved	<2.2	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 11:22	7440-50-8	D3
Iron, Dissolved	2240	ug/L	500	116	2	10/25/19 05:58	10/26/19 11:22	7439-89-6	
Manganese, Dissolved	5100	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 00:08	7439-96-5	
Nickel, Dissolved	5.6	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 11:22	7440-02-0	
Silver, Dissolved	<0.25	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 11:22	7440-22-4	D3
Vanadium, Dissolved	1.1J	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 11:22	7440-62-2	D3
Zinc, Dissolved	<20.7	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 11:22	7440-66-6	D3
<b>8270 MSSV PAH by HVI</b>									
Analytical Method: EPA 8270 by HVI    Preparation Method: EPA 3510									
Anthracene	0.032J	ug/L	0.055	0.011	1	10/24/19 11:30	10/25/19 17:19	120-12-7	
Benzo(a)pyrene	<0.011	ug/L	0.055	0.011	1	10/24/19 11:30	10/25/19 17:19	50-32-8	
Benzo(b)fluoranthene	0.039	ug/L	0.030	0.0060	1	10/24/19 11:30	10/25/19 17:19	205-99-2	
Benzo(g,h,i)perylene	0.031J	ug/L	0.036	0.0071	1	10/24/19 11:30	10/25/19 17:19	191-24-2	
Chrysene	0.032J	ug/L	0.069	0.014	1	10/24/19 11:30	10/25/19 17:19	218-01-9	
Fluoranthene	0.020J	ug/L	0.056	0.011	1	10/24/19 11:30	10/25/19 17:19	206-44-0	
Fluorene	<0.0084	ug/L	0.042	0.0084	1	10/24/19 11:30	10/25/19 17:19	86-73-7	
Naphthalene	<0.019	ug/L	0.096	0.019	1	10/24/19 11:30	10/25/19 17:19	91-20-3	
Phenanthrene	<0.015	ug/L	0.073	0.015	1	10/24/19 11:30	10/25/19 17:19	85-01-8	
Pyrene	0.043	ug/L	0.040	0.0081	1	10/24/19 11:30	10/25/19 17:19	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	66	%	30-85		1	10/24/19 11:30	10/25/19 17:19	321-60-8	
Terphenyl-d14 (S)	96	%	10-120		1	10/24/19 11:30	10/25/19 17:19	1718-51-0	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/24/19 22:00	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/24/19 22:00	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/24/19 22:00	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/24/19 22:00	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/24/19 22:00	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/24/19 22:00	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	90	%	70-130		1		10/24/19 22:00	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		10/24/19 22:00	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		10/24/19 22:00	460-00-4	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0									
Sulfate	123	mg/L	15.0	5.0	5		11/05/19 18:43	14808-79-8	
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	454	mg/L	95.4	28.6	2		10/30/19 14:07		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	<0.095	mg/L	0.25	0.095	1		11/01/19 11:30		

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

Sample: 102119006 Lab ID: 40197837006 Collected: 10/21/19 18:38 Received: 10/23/19 12:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	5130	ug/L	112	26.6	40		10/29/19 11:37	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020 Preparation Method: EPA 3010									
Aluminum, Dissolved	<117	ug/L	500	117	2	10/25/19 05:58	10/26/19 11:29	7429-90-5	D3
Antimony, Dissolved	<0.30	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 11:29	7440-36-0	D3
Copper, Dissolved	<2.2	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 11:29	7440-50-8	D3
Iron, Dissolved	13600	ug/L	500	116	2	10/25/19 05:58	10/26/19 11:29	7439-89-6	
Manganese, Dissolved	835	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 00:15	7439-96-5	
Nickel, Dissolved	4.4	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 11:29	7440-02-0	
Silver, Dissolved	<0.25	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 11:29	7440-22-4	D3
Vanadium, Dissolved	3.5	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 11:29	7440-62-2	
Zinc, Dissolved	<20.7	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 11:29	7440-66-6	D3
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Anthracene	0.032J	ug/L	0.051	0.010	1	10/24/19 11:30	10/25/19 17:38	120-12-7	
Benzo(a)pyrene	0.044J	ug/L	0.051	0.010	1	10/24/19 11:30	10/25/19 17:38	50-32-8	
Benzo(b)fluoranthene	0.073	ug/L	0.028	0.0056	1	10/24/19 11:30	10/25/19 17:38	205-99-2	
Benzo(g,h,i)perylene	0.049	ug/L	0.033	0.0066	1	10/24/19 11:30	10/25/19 17:38	191-24-2	
Chrysene	0.088	ug/L	0.063	0.013	1	10/24/19 11:30	10/25/19 17:38	218-01-9	
Fluoranthene	0.10	ug/L	0.052	0.010	1	10/24/19 11:30	10/25/19 17:38	206-44-0	
Fluorene	0.048	ug/L	0.039	0.0077	1	10/24/19 11:30	10/25/19 17:38	86-73-7	
Naphthalene	0.023J	ug/L	0.089	0.018	1	10/24/19 11:30	10/25/19 17:38	91-20-3	
Phenanthrene	0.021J	ug/L	0.067	0.013	1	10/24/19 11:30	10/25/19 17:38	85-01-8	
Pyrene	0.10	ug/L	0.037	0.0074	1	10/24/19 11:30	10/25/19 17:38	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	64	%	30-85		1	10/24/19 11:30	10/25/19 17:38	321-60-8	
Terphenyl-d14 (S)	87	%	10-120		1	10/24/19 11:30	10/25/19 17:38	1718-51-0	
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/24/19 22:22	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/24/19 22:22	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/24/19 22:22	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/24/19 22:22	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/24/19 22:22	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/24/19 22:22	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	91	%	70-130		1		10/24/19 22:22	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		10/24/19 22:22	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1		10/24/19 22:22	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	24.1	mg/L	15.0	5.0	5		11/04/19 21:40	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	397	mg/L	95.4	28.6	2		10/30/19 14:10		

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

<b>Sample: 102119006</b>	<b>Lab ID: 40197837006</b>	Collected: 10/21/19 18:38	Received: 10/23/19 12:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual

<b>353.2 Nitrogen, NO2/NO3 pres.</b>	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	<b>&lt;0.095</b>	mg/L	0.25	0.095	1		11/01/19 11:33		

<b>Sample: 102119007</b>	<b>Lab ID: 40197837007</b>	Collected: 10/21/19 18:50	Received: 10/23/19 12:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual

<b>8260 MSV UST</b>	Analytical Method: EPA 8260								
Benzene	<b>&lt;0.25</b>	ug/L	1.0	0.25	1		10/24/19 22:43	71-43-2	
Ethylbenzene	<b>&lt;0.22</b>	ug/L	1.0	0.22	1		10/24/19 22:43	100-41-4	
Toluene	<b>&lt;0.17</b>	ug/L	5.0	0.17	1		10/24/19 22:43	108-88-3	
Xylene (Total)	<b>&lt;1.5</b>	ug/L	3.0	1.5	1		10/24/19 22:43	1330-20-7	
m&p-Xylene	<b>&lt;0.47</b>	ug/L	2.0	0.47	1		10/24/19 22:43	179601-23-1	
o-Xylene	<b>&lt;0.26</b>	ug/L	1.0	0.26	1		10/24/19 22:43	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	91	%	70-130		1		10/24/19 22:43	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		10/24/19 22:43	2037-26-5	
4-Bromofluorobenzene (S)	93	%	70-130		1		10/24/19 22:43	460-00-4	

<b>Sample: 102219008</b>	<b>Lab ID: 40197837008</b>	Collected: 10/22/19 07:45	Received: 10/23/19 12:45	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual

<b>Methane, Ethane, Ethene GCV</b>	Analytical Method: EPA 8015B Modified								
Methane	<b>&lt;0.66</b>	ug/L	2.8	0.66	1		10/29/19 09:24	74-82-8	

<b>6020 MET ICPMS, Dissolved</b>	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Aluminum, Dissolved	<b>&lt;117</b>	ug/L	500	117	2	10/25/19 05:58	10/26/19 11:36	7429-90-5	D3
Antimony, Dissolved	<b>&lt;0.30</b>	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 11:36	7440-36-0	D3
Copper, Dissolved	<b>&lt;2.2</b>	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 11:36	7440-50-8	D3
Iron, Dissolved	<b>&lt;116</b>	ug/L	500	116	2	10/25/19 05:58	10/26/19 11:36	7439-89-6	D3
Manganese, Dissolved	<b>284</b>	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 00:21	7439-96-5	
Nickel, Dissolved	<b>0.87J</b>	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 11:36	7440-02-0	D3
Silver, Dissolved	<b>&lt;0.25</b>	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 11:36	7440-22-4	D3
Vanadium, Dissolved	<b>&lt;0.63</b>	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 11:36	7440-62-2	D3
Zinc, Dissolved	<b>&lt;20.7</b>	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 11:36	7440-66-6	D3

<b>8270 MSSV PAH by HVI</b>	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Anthracene	<b>&lt;0.012</b>	ug/L	0.059	0.012	1	10/24/19 11:30	10/25/19 17:56	120-12-7	
Benzo(a)pyrene	<b>&lt;0.012</b>	ug/L	0.059	0.012	1	10/24/19 11:30	10/25/19 17:56	50-32-8	
Benzo(b)fluoranthene	<b>&lt;0.0064</b>	ug/L	0.032	0.0064	1	10/24/19 11:30	10/25/19 17:56	205-99-2	
Benzo(g,h,i)perylene	<b>&lt;0.0076</b>	ug/L	0.038	0.0076	1	10/24/19 11:30	10/25/19 17:56	191-24-2	
Chrysene	<b>&lt;0.015</b>	ug/L	0.073	0.015	1	10/24/19 11:30	10/25/19 17:56	218-01-9	

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

Sample: 102219008      Lab ID: 40197837008      Collected: 10/22/19 07:45      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
Fluoranthene	<0.012	ug/L	0.060	0.012	1	10/24/19 11:30	10/25/19 17:56	206-44-0	
Fluorene	<0.0090	ug/L	0.045	0.0090	1	10/24/19 11:30	10/25/19 17:56	86-73-7	
Naphthalene	<0.021	ug/L	0.10	0.021	1	10/24/19 11:30	10/25/19 17:56	91-20-3	
Phenanthrene	<0.015	ug/L	0.077	0.015	1	10/24/19 11:30	10/25/19 17:56	85-01-8	
Pyrene	<0.0086	ug/L	0.043	0.0086	1	10/24/19 11:30	10/25/19 17:56	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	74	%	30-85		1	10/24/19 11:30	10/25/19 17:56	321-60-8	
Terphenyl-d14 (S)	107	%	10-120		1	10/24/19 11:30	10/25/19 17:56	1718-51-0	
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/24/19 23:05	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/24/19 23:05	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/24/19 23:05	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/24/19 23:05	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/24/19 23:05	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/24/19 23:05	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	92	%	70-130		1		10/24/19 23:05	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		10/24/19 23:05	2037-26-5	
4-Bromofluorobenzene (S)	92	%	70-130		1		10/24/19 23:05	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	70.9	mg/L	15.0	5.0	5		11/05/19 18:56	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	260	mg/L	95.4	28.6	2		11/04/19 11:07		
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	3.9	mg/L	0.25	0.095	1		11/01/19 11:33		

Sample: 102219009      Lab ID: 40197837009      Collected: 10/22/19 07:50      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	<0.66	ug/L	2.8	0.66	1		10/29/19 09:31	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<117	ug/L	500	117	2	10/25/19 05:58	10/26/19 11:43	7429-90-5	D3
Antimony, Dissolved	<0.30	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 11:43	7440-36-0	D3
Copper, Dissolved	2.4J	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 11:43	7440-50-8	D3
Iron, Dissolved	<116	ug/L	500	116	2	10/25/19 05:58	10/26/19 11:43	7439-89-6	D3
Manganese, Dissolved	312	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 00:28	7439-96-5	
Nickel, Dissolved	1.1J	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 11:43	7440-02-0	D3

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

**Sample: 102219009**      **Lab ID: 40197837009**      Collected: 10/22/19 07:50      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020    Preparation Method: EPA 3010									
Silver, Dissolved	<0.25	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 11:43	7440-22-4	D3
Vanadium, Dissolved	<0.63	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 11:43	7440-62-2	D3
Zinc, Dissolved	<20.7	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 11:43	7440-66-6	D3
<b>8270 MSSV PAH by HVI</b>									
Analytical Method: EPA 8270 by HVI    Preparation Method: EPA 3510									
Anthracene	<0.011	ug/L	0.056	0.011	1	10/24/19 11:30	10/25/19 18:14	120-12-7	
Benzo(a)pyrene	<0.011	ug/L	0.056	0.011	1	10/24/19 11:30	10/25/19 18:14	50-32-8	
Benzo(b)fluoranthene	<0.0061	ug/L	0.031	0.0061	1	10/24/19 11:30	10/25/19 18:14	205-99-2	
Benzo(g,h,i)perylene	<0.0072	ug/L	0.036	0.0072	1	10/24/19 11:30	10/25/19 18:14	191-24-2	
Chrysene	<0.014	ug/L	0.069	0.014	1	10/24/19 11:30	10/25/19 18:14	218-01-9	
Fluoranthene	<0.011	ug/L	0.057	0.011	1	10/24/19 11:30	10/25/19 18:14	206-44-0	
Fluorene	<0.0085	ug/L	0.042	0.0085	1	10/24/19 11:30	10/25/19 18:14	86-73-7	
Naphthalene	<0.020	ug/L	0.097	0.020	1	10/24/19 11:30	10/25/19 18:14	91-20-3	
Phenanthrene	<0.015	ug/L	0.073	0.015	1	10/24/19 11:30	10/25/19 18:14	85-01-8	
Pyrene	<0.0081	ug/L	0.041	0.0081	1	10/24/19 11:30	10/25/19 18:14	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	68	%	30-85		1	10/24/19 11:30	10/25/19 18:14	321-60-8	
Terphenyl-d14 (S)	98	%	10-120		1	10/24/19 11:30	10/25/19 18:14	1718-51-0	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/24/19 23:27	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/24/19 23:27	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/24/19 23:27	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/24/19 23:27	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/24/19 23:27	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/24/19 23:27	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	91	%	70-130		1		10/24/19 23:27	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		10/24/19 23:27	2037-26-5	
4-Bromofluorobenzene (S)	95	%	70-130		1		10/24/19 23:27	460-00-4	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0									
Sulfate	67.1	mg/L	15.0	5.0	5		11/05/19 19:10	14808-79-8	
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	262	mg/L	95.4	28.6	2		11/04/19 11:10		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	3.9	mg/L	0.25	0.095	1		11/01/19 11:34		

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

**Sample: 102219010**      **Lab ID: 40197837010**      Collected: 10/22/19 08:47      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>		Analytical Method: EPA 8015B Modified							
Methane	<b>22.0</b>	ug/L	2.8	0.66	1		10/29/19 09:38	74-82-8	
<b>6020 MET ICPMS, Dissolved</b>		Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Aluminum, Dissolved	<b>&lt;0.117</b>	ug/L	500	117	2	10/25/19 05:58	10/26/19 11:50	7429-90-5	D3
Antimony, Dissolved	<b>&lt;0.30</b>	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 11:50	7440-36-0	D3
Copper, Dissolved	<b>&lt;2.2</b>	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 11:50	7440-50-8	D3
Iron, Dissolved	<b>771</b>	ug/L	500	116	2	10/25/19 05:58	10/26/19 11:50	7439-89-6	
Manganese, Dissolved	<b>770</b>	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 00:35	7439-96-5	
Nickel, Dissolved	<b>1.7J</b>	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 11:50	7440-02-0	D3
Silver, Dissolved	<b>&lt;0.25</b>	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 11:50	7440-22-4	D3
Vanadium, Dissolved	<b>1.2J</b>	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 11:50	7440-62-2	D3
Zinc, Dissolved	<b>25.9J</b>	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 11:50	7440-66-6	D3
<b>8270 MSSV PAH by HVI</b>		Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510							
Anthracene	<b>0.043J</b>	ug/L	0.056	0.011	1	10/24/19 11:30	10/25/19 20:59	120-12-7	
Benzo(a)pyrene	<b>0.014J</b>	ug/L	0.057	0.011	1	10/24/19 11:30	10/25/19 20:59	50-32-8	
Benzo(b)fluoranthene	<b>0.029J</b>	ug/L	0.031	0.0062	1	10/24/19 11:30	10/25/19 20:59	205-99-2	
Benzo(g,h,i)perylene	<b>0.017J</b>	ug/L	0.036	0.0073	1	10/24/19 11:30	10/25/19 20:59	191-24-2	
Chrysene	<b>0.045J</b>	ug/L	0.070	0.014	1	10/24/19 11:30	10/25/19 20:59	218-01-9	
Fluoranthene	<b>0.40</b>	ug/L	0.057	0.011	1	10/24/19 11:30	10/25/19 20:59	206-44-0	
Fluorene	<b>0.061</b>	ug/L	0.043	0.0086	1	10/24/19 11:30	10/25/19 20:59	86-73-7	
Naphthalene	<b>&lt;0.020</b>	ug/L	0.099	0.020	1	10/24/19 11:30	10/25/19 20:59	91-20-3	
Phenanthrene	<b>0.055J</b>	ug/L	0.074	0.015	1	10/24/19 11:30	10/25/19 20:59	85-01-8	
Pyrene	<b>0.39</b>	ug/L	0.041	0.0082	1	10/24/19 11:30	10/25/19 20:59	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	68	%	30-85		1	10/24/19 11:30	10/25/19 20:59	321-60-8	
Terphenyl-d14 (S)	109	%	10-120		1	10/24/19 11:30	10/25/19 20:59	1718-51-0	
<b>8260 MSV UST</b>		Analytical Method: EPA 8260							
Benzene	<b>&lt;0.25</b>	ug/L	1.0	0.25	1		10/24/19 23:49	71-43-2	
Ethylbenzene	<b>&lt;0.22</b>	ug/L	1.0	0.22	1		10/24/19 23:49	100-41-4	
Toluene	<b>&lt;0.17</b>	ug/L	5.0	0.17	1		10/24/19 23:49	108-88-3	
Xylene (Total)	<b>&lt;1.5</b>	ug/L	3.0	1.5	1		10/24/19 23:49	1330-20-7	
m&p-Xylene	<b>&lt;0.47</b>	ug/L	2.0	0.47	1		10/24/19 23:49	179601-23-1	
o-Xylene	<b>&lt;0.26</b>	ug/L	1.0	0.26	1		10/24/19 23:49	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	90	%	70-130		1		10/24/19 23:49	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		10/24/19 23:49	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		1		10/24/19 23:49	460-00-4	
<b>300.0 IC Anions</b>		Analytical Method: EPA 300.0							
Sulfate	<b>27.0</b>	mg/L	3.0	1.0	1		11/04/19 22:22	14808-79-8	
<b>310.2 Alkalinity</b>		Analytical Method: EPA 310.2							
Alkalinity, Total as CaCO3	<b>328</b>	mg/L	95.4	28.6	2		11/04/19 11:11		

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

Sample: 102219010 Lab ID: 40197837010 Collected: 10/22/19 08:47 Received: 10/23/19 12:45 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	<0.095	mg/L	0.25	0.095	1		11/01/19 11:35		

Sample: 102219011 Lab ID: 40197837011 Collected: 10/22/19 09:15 Received: 10/23/19 12:45 Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	468	ug/L	11.2	2.7	4		10/29/19 11:44	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020 Preparation Method: EPA 3010									
Aluminum, Dissolved	<117	ug/L	500	117	2	10/25/19 05:58	10/26/19 11:57	7429-90-5	D3
Antimony, Dissolved	0.36J	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 11:57	7440-36-0	D3
Copper, Dissolved	23.0	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 11:57	7440-50-8	
Iron, Dissolved	810	ug/L	500	116	2	10/25/19 05:58	10/26/19 11:57	7439-89-6	
Manganese, Dissolved	4860	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 00:42	7439-96-5	
Nickel, Dissolved	27.0	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 11:57	7440-02-0	
Silver, Dissolved	<0.25	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 11:57	7440-22-4	D3
Vanadium, Dissolved	<0.63	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 11:57	7440-62-2	D3
Zinc, Dissolved	172	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 11:57	7440-66-6	

<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510									
Anthracene	<0.010	ug/L	0.050	0.010	1	10/25/19 08:00	10/25/19 18:32	120-12-7	
Benzo(a)pyrene	<0.010	ug/L	0.051	0.010	1	10/25/19 08:00	10/25/19 18:32	50-32-8	
Benzo(b)fluoranthene	0.0062J	ug/L	0.028	0.0055	1	10/25/19 08:00	10/25/19 18:32	205-99-2	
Benzo(g,h,i)perylene	<0.0065	ug/L	0.033	0.0065	1	10/25/19 08:00	10/25/19 18:32	191-24-2	
Chrysene	0.013J	ug/L	0.063	0.013	1	10/25/19 08:00	10/25/19 18:32	218-01-9	
Fluoranthene	0.012J	ug/L	0.051	0.010	1	10/25/19 08:00	10/25/19 18:32	206-44-0	
Fluorene	<0.0077	ug/L	0.038	0.0077	1	10/25/19 08:00	10/25/19 18:32	86-73-7	
Naphthalene	<0.018	ug/L	0.088	0.018	1	10/25/19 08:00	10/25/19 18:32	91-20-3	
Phenanthrene	<0.013	ug/L	0.066	0.013	1	10/25/19 08:00	10/25/19 18:32	85-01-8	
Pyrene	0.012J	ug/L	0.037	0.0074	1	10/25/19 08:00	10/25/19 18:32	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	67	%	30-85		1	10/25/19 08:00	10/25/19 18:32	321-60-8	
Terphenyl-d14 (S)	79	%	10-120		1	10/25/19 08:00	10/25/19 18:32	1718-51-0	

<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/25/19 00:11	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/25/19 00:11	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/25/19 00:11	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/25/19 00:11	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/25/19 00:11	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/25/19 00:11	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	89	%	70-130		1		10/25/19 00:11	1868-53-7	

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

Sample: 102219011      Lab ID: 40197837011      Collected: 10/22/19 09:15      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
<i><b>Surrogates</b></i>									
Toluene-d8 (S)	96	%	70-130		1		10/25/19 00:11	2037-26-5	
4-Bromofluorobenzene (S)	95	%	70-130		1		10/25/19 00:11	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	<b>299</b>	mg/L	30.0	10.0	10		11/05/19 19:24	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	<b>865</b>	mg/L	477	143	10		11/04/19 11:34		
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	<b>&lt;0.095</b>	mg/L	0.25	0.095	1		11/01/19 11:35		

Sample: 102219012      Lab ID: 40197837012      Collected: 10/22/19 09:58      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	<b>239</b>	ug/L	2.8	0.66	1		10/29/19 09:52	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<b>&lt;117</b>	ug/L	500	117	2	10/25/19 05:58	10/26/19 12:04	7429-90-5	D3
Antimony, Dissolved	<b>0.77J</b>	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 12:04	7440-36-0	D3
Copper, Dissolved	<b>7.7</b>	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 12:04	7440-50-8	
Iron, Dissolved	<b>&lt;116</b>	ug/L	500	116	2	10/25/19 05:58	10/26/19 12:04	7439-89-6	D3
Manganese, Dissolved	<b>383</b>	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 00:49	7439-96-5	
Nickel, Dissolved	<b>2.1</b>	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 12:04	7440-02-0	
Silver, Dissolved	<b>&lt;0.25</b>	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 12:04	7440-22-4	D3
Vanadium, Dissolved	<b>1.9J</b>	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 12:04	7440-62-2	D3
Zinc, Dissolved	<b>&lt;20.7</b>	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 12:04	7440-66-6	D3
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
Anthracene	<b>0.038J</b>	ug/L	0.053	0.011	1	10/25/19 08:00	10/25/19 18:51	120-12-7	
Benzo(a)pyrene	<b>0.057</b>	ug/L	0.054	0.011	1	10/25/19 08:00	10/25/19 18:51	50-32-8	
Benzo(b)fluoranthene	<b>0.10</b>	ug/L	0.029	0.0059	1	10/25/19 08:00	10/25/19 18:51	205-99-2	
Benzo(g,h,i)perylene	<b>0.070</b>	ug/L	0.035	0.0069	1	10/25/19 08:00	10/25/19 18:51	191-24-2	
Chrysene	<b>0.097</b>	ug/L	0.067	0.013	1	10/25/19 08:00	10/25/19 18:51	218-01-9	
Fluoranthene	<b>0.088</b>	ug/L	0.054	0.011	1	10/25/19 08:00	10/25/19 18:51	206-44-0	
Fluorene	<b>&lt;0.0081</b>	ug/L	0.041	0.0081	1	10/25/19 08:00	10/25/19 18:51	86-73-7	
Naphthalene	<b>0.022J</b>	ug/L	0.094	0.019	1	10/25/19 08:00	10/25/19 18:51	91-20-3	
Phenanthrene	<b>0.028J</b>	ug/L	0.070	0.014	1	10/25/19 08:00	10/25/19 18:51	85-01-8	
Pyrene	<b>0.097</b>	ug/L	0.039	0.0078	1	10/25/19 08:00	10/25/19 18:51	129-00-0	
<i><b>Surrogates</b></i>									
2-Fluorobiphenyl (S)	66	%	30-85		1	10/25/19 08:00	10/25/19 18:51	321-60-8	

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

**Sample: 102219012**      **Lab ID: 40197837012**      Collected: 10/22/19 09:58      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
<b>Surrogates</b>									
Terphenyl-d14 (S)	69	%	10-120		1	10/25/19 08:00	10/25/19 18:51	1718-51-0	
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/25/19 00:32	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/25/19 00:32	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/25/19 00:32	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/25/19 00:32	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/25/19 00:32	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/25/19 00:32	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	90	%	70-130		1		10/25/19 00:32	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		10/25/19 00:32	2037-26-5	
4-Bromofluorobenzene (S)	93	%	70-130		1		10/25/19 00:32	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	18.1	mg/L	3.0	1.0	1		11/04/19 23:31	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	221	mg/L	95.4	28.6	2		11/04/19 11:12		
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	0.39	mg/L	0.25	0.095	1		11/01/19 11:36		

**Sample: 102219013**      **Lab ID: 40197837013**      Collected: 10/22/19 10:20      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	<0.66	ug/L	2.8	0.66	1		10/29/19 09:59	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<117	ug/L	500	117	2	10/25/19 05:58	10/26/19 12:11	7429-90-5	D3
Antimony, Dissolved	<0.30	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 12:11	7440-36-0	D3
Copper, Dissolved	<2.2	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 12:11	7440-50-8	D3
Iron, Dissolved	<116	ug/L	500	116	2	10/25/19 05:58	10/26/19 12:11	7439-89-6	D3
Manganese, Dissolved	3.1J	ug/L	8.1	2.4	2	10/25/19 05:58	10/29/19 01:09	7439-96-5	D3
Nickel, Dissolved	0.60J	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 12:11	7440-02-0	D3
Silver, Dissolved	<0.25	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 12:11	7440-22-4	D3
Vanadium, Dissolved	<0.63	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 12:11	7440-62-2	D3
Zinc, Dissolved	<20.7	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 12:11	7440-66-6	D3

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

**Sample: 102219013**      **Lab ID: 40197837013**      Collected: 10/22/19 10:20      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
Anthracene	0.012J	ug/L	0.052	0.010	1	10/25/19 08:00	10/25/19 19:09	120-12-7	
Benzo(a)pyrene	<0.010	ug/L	0.052	0.010	1	10/25/19 08:00	10/25/19 19:09	50-32-8	
Benzo(b)fluoranthene	0.0083J	ug/L	0.028	0.0057	1	10/25/19 08:00	10/25/19 19:09	205-99-2	
Benzo(g,h,i)perylene	<0.0067	ug/L	0.034	0.0067	1	10/25/19 08:00	10/25/19 19:09	191-24-2	
Chrysene	0.019J	ug/L	0.065	0.013	1	10/25/19 08:00	10/25/19 19:09	218-01-9	
Fluoranthene	0.012J	ug/L	0.053	0.011	1	10/25/19 08:00	10/25/19 19:09	206-44-0	
Fluorene	<0.0079	ug/L	0.039	0.0079	1	10/25/19 08:00	10/25/19 19:09	86-73-7	
Naphthalene	<0.018	ug/L	0.091	0.018	1	10/25/19 08:00	10/25/19 19:09	91-20-3	
Phenanthrene	<0.014	ug/L	0.068	0.014	1	10/25/19 08:00	10/25/19 19:09	85-01-8	
Pyrene	0.016J	ug/L	0.038	0.0076	1	10/25/19 08:00	10/25/19 19:09	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	77	%	30-85		1	10/25/19 08:00	10/25/19 19:09	321-60-8	
Terphenyl-d14 (S)	99	%	10-120		1	10/25/19 08:00	10/25/19 19:09	1718-51-0	
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/25/19 00:54	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/25/19 00:54	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/25/19 00:54	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/25/19 00:54	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/25/19 00:54	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/25/19 00:54	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	93	%	70-130		1		10/25/19 00:54	1868-53-7	
Toluene-d8 (S)	96	%	70-130		1		10/25/19 00:54	2037-26-5	
4-Bromofluorobenzene (S)	96	%	70-130		1		10/25/19 00:54	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	857	mg/L	150	50.0	50		11/05/19 19:38	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	148J	mg/L	238	71.5	5		11/04/19 11:12		D3,M0
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	<0.095	mg/L	0.25	0.095	1		11/01/19 11:37		

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

**Sample: 102219015**      **Lab ID: 40197837015**      Collected: 10/22/19 11:55      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	<0.66	ug/L	2.8	0.66	1		10/29/19 10:13	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<117	ug/L	500	117	2	10/25/19 05:58	10/26/19 12:24	7429-90-5	D3
Antimony, Dissolved	<0.30	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 12:24	7440-36-0	D3
Copper, Dissolved	2.2J	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 12:24	7440-50-8	D3
Iron, Dissolved	1270	ug/L	500	116	2	10/25/19 05:58	10/26/19 12:24	7439-89-6	
Manganese, Dissolved	167	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 01:23	7439-96-5	
Nickel, Dissolved	1.8J	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 12:24	7440-02-0	D3
Silver, Dissolved	<0.25	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 12:24	7440-22-4	D3
Vanadium, Dissolved	0.74J	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 12:24	7440-62-2	D3
Zinc, Dissolved	<20.7	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 12:24	7440-66-6	D3
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
Anthracene	<0.011	ug/L	0.054	0.011	1	10/25/19 08:00	10/25/19 21:54	120-12-7	
Benzo(a)pyrene	<0.011	ug/L	0.055	0.011	1	10/25/19 08:00	10/25/19 21:54	50-32-8	
Benzo(b)fluoranthene	0.0094J	ug/L	0.030	0.0060	1	10/25/19 08:00	10/25/19 21:54	205-99-2	
Benzo(g,h,i)perylene	0.013J	ug/L	0.035	0.0071	1	10/25/19 08:00	10/25/19 21:54	191-24-2	
Chrysene	0.029J	ug/L	0.068	0.014	1	10/25/19 08:00	10/25/19 21:54	218-01-9	
Fluoranthene	0.040J	ug/L	0.056	0.011	1	10/25/19 08:00	10/25/19 21:54	206-44-0	
Fluorene	<0.0083	ug/L	0.042	0.0083	1	10/25/19 08:00	10/25/19 21:54	86-73-7	
Naphthalene	<0.019	ug/L	0.095	0.019	1	10/25/19 08:00	10/25/19 21:54	91-20-3	
Phenanthrene	0.024J	ug/L	0.072	0.014	1	10/25/19 08:00	10/25/19 21:54	85-01-8	
Pyrene	0.029J	ug/L	0.040	0.0080	1	10/25/19 08:00	10/25/19 21:54	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	76	%	30-85		1	10/25/19 08:00	10/25/19 21:54	321-60-8	
Terphenyl-d14 (S)	93	%	10-120		1	10/25/19 08:00	10/25/19 21:54	1718-51-0	
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/25/19 01:38	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/25/19 01:38	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/25/19 01:38	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/25/19 01:38	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/25/19 01:38	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/25/19 01:38	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	96	%	70-130		1		10/25/19 01:38	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		10/25/19 01:38	2037-26-5	
4-Bromofluorobenzene (S)	92	%	70-130		1		10/25/19 01:38	460-00-4	
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	1.6	mg/L	0.25	0.095	1		11/01/19 11:38		

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

**Sample: 102219016**      **Lab ID: 40197837016**      Collected: 10/22/19 12:48      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	<b>7090</b>	ug/L	140	33.2	50		10/29/19 11:58	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<b>&lt;117</b>	ug/L	500	117	2	10/25/19 05:58	10/26/19 12:45	7429-90-5	D3
Antimony, Dissolved	<b>&lt;0.30</b>	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 12:45	7440-36-0	D3
Copper, Dissolved	<b>&lt;2.2</b>	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 12:45	7440-50-8	D3
Iron, Dissolved	<b>16400</b>	ug/L	500	116	2	10/25/19 05:58	10/26/19 12:45	7439-89-6	
Manganese, Dissolved	<b>170</b>	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 01:30	7439-96-5	
Nickel, Dissolved	<b>&lt;0.57</b>	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 12:45	7440-02-0	D3
Silver, Dissolved	<b>&lt;0.25</b>	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 12:45	7440-22-4	D3
Vanadium, Dissolved	<b>&lt;0.63</b>	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 12:45	7440-62-2	D3
Zinc, Dissolved	<b>&lt;20.7</b>	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 12:45	7440-66-6	D3
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
Anthracene	<b>0.15</b>	ug/L	0.053	0.011	1	10/25/19 08:00	10/25/19 20:41	120-12-7	
Benzo(a)pyrene	<b>0.052J</b>	ug/L	0.054	0.011	1	10/25/19 08:00	10/25/19 20:41	50-32-8	
Benzo(b)fluoranthene	<b>0.076</b>	ug/L	0.029	0.0059	1	10/25/19 08:00	10/25/19 20:41	205-99-2	
Benzo(g,h,i)perylene	<b>0.046</b>	ug/L	0.035	0.0069	1	10/25/19 08:00	10/25/19 20:41	191-24-2	
Chrysene	<b>0.13</b>	ug/L	0.067	0.013	1	10/25/19 08:00	10/25/19 20:41	218-01-9	
Fluoranthene	<b>0.32</b>	ug/L	0.054	0.011	1	10/25/19 08:00	10/25/19 20:41	206-44-0	
Fluorene	<b>0.41</b>	ug/L	0.041	0.0081	1	10/25/19 08:00	10/25/19 20:41	86-73-7	
Naphthalene	<b>0.067J</b>	ug/L	0.094	0.019	1	10/25/19 08:00	10/25/19 20:41	91-20-3	
Phenanthrene	<b>0.40</b>	ug/L	0.070	0.014	1	10/25/19 08:00	10/25/19 20:41	85-01-8	
Pyrene	<b>0.35</b>	ug/L	0.039	0.0078	1	10/25/19 08:00	10/25/19 20:41	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	71	%	30-85		1	10/25/19 08:00	10/25/19 20:41	321-60-8	
Terphenyl-d14 (S)	84	%	10-120		1	10/25/19 08:00	10/25/19 20:41	1718-51-0	
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<b>&lt;0.25</b>	ug/L	1.0	0.25	1		10/25/19 02:00	71-43-2	
Ethylbenzene	<b>&lt;0.22</b>	ug/L	1.0	0.22	1		10/25/19 02:00	100-41-4	
Toluene	<b>&lt;0.17</b>	ug/L	5.0	0.17	1		10/25/19 02:00	108-88-3	
Xylene (Total)	<b>&lt;1.5</b>	ug/L	3.0	1.5	1		10/25/19 02:00	1330-20-7	
m&p-Xylene	<b>&lt;0.47</b>	ug/L	2.0	0.47	1		10/25/19 02:00	179601-23-1	
o-Xylene	<b>&lt;0.26</b>	ug/L	1.0	0.26	1		10/25/19 02:00	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	93	%	70-130		1		10/25/19 02:00	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		10/25/19 02:00	2037-26-5	
4-Bromofluorobenzene (S)	95	%	70-130		1		10/25/19 02:00	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	<b>&lt;5.0</b>	mg/L	15.0	5.0	5		11/05/19 00:13	14808-79-8	D3
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	<b>212J</b>	mg/L	238	71.5	5		11/04/19 11:15		D3

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

Sample: 102219016      Lab ID: 40197837016      Collected: 10/22/19 12:48      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	<0.095	mg/L	0.25	0.095	1		11/01/19 11:39		

Sample: 102219017      Lab ID: 40197837017      Collected: 10/22/19 13:33      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	583	ug/L	14.0	3.3	5		10/29/19 12:05	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<117	ug/L	500	117	2	10/25/19 05:58	10/26/19 12:52	7429-90-5	D3
Antimony, Dissolved	0.40J	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 12:52	7440-36-0	D3
Copper, Dissolved	<2.2	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 12:52	7440-50-8	D3
Iron, Dissolved	3440	ug/L	500	116	2	10/25/19 05:58	10/26/19 12:52	7439-89-6	
Manganese, Dissolved	732	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 01:36	7439-96-5	
Nickel, Dissolved	1.4J	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 12:52	7440-02-0	D3
Silver, Dissolved	<0.25	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 12:52	7440-22-4	D3
Vanadium, Dissolved	1.3J	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 12:52	7440-62-2	D3
Zinc, Dissolved	<20.7	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 12:52	7440-66-6	D3

<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
Anthracene	0.020J	ug/L	0.055	0.011	1	10/25/19 08:00	10/25/19 22:12	120-12-7	
Benzo(a)pyrene	<0.011	ug/L	0.055	0.011	1	10/25/19 08:00	10/25/19 22:12	50-32-8	
Benzo(b)fluoranthene	<0.0060	ug/L	0.030	0.0060	1	10/25/19 08:00	10/25/19 22:12	205-99-2	
Benzo(g,h,i)perylene	<0.0071	ug/L	0.036	0.0071	1	10/25/19 08:00	10/25/19 22:12	191-24-2	
Chrysene	<0.014	ug/L	0.069	0.014	1	10/25/19 08:00	10/25/19 22:12	218-01-9	
Fluoranthene	0.026J	ug/L	0.056	0.011	1	10/25/19 08:00	10/25/19 22:12	206-44-0	
Fluorene	0.077	ug/L	0.042	0.0084	1	10/25/19 08:00	10/25/19 22:12	86-73-7	
Naphthalene	<0.019	ug/L	0.096	0.019	1	10/25/19 08:00	10/25/19 22:12	91-20-3	
Phenanthrene	<0.015	ug/L	0.073	0.015	1	10/25/19 08:00	10/25/19 22:12	85-01-8	
Pyrene	0.022J	ug/L	0.040	0.0081	1	10/25/19 08:00	10/25/19 22:12	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	67	%	30-85		1	10/25/19 08:00	10/25/19 22:12	321-60-8	
Terphenyl-d14 (S)	75	%	10-120		1	10/25/19 08:00	10/25/19 22:12	1718-51-0	

<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/25/19 02:22	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/25/19 02:22	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/25/19 02:22	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/25/19 02:22	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/25/19 02:22	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/25/19 02:22	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	92	%	70-130		1		10/25/19 02:22	1868-53-7	

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

Sample: 102219017      Lab ID: 40197837017      Collected: 10/22/19 13:33      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
<b>Surrogates</b>									
Toluene-d8 (S)	94	%	70-130		1		10/25/19 02:22	2037-26-5	
4-Bromofluorobenzene (S)	93	%	70-130		1		10/25/19 02:22	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	<b>64.4</b>	mg/L	15.0	5.0	5		11/05/19 19:52	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	<b>410</b>	mg/L	238	71.5	5		11/04/19 11:16		
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	<b>&lt;0.095</b>	mg/L	0.25	0.095	1		11/01/19 11:41		

Sample: 102219018      Lab ID: 40197837018      Collected: 10/22/19 13:38      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	<b>254</b>	ug/L	2.8	0.66	1		11/05/19 08:51	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<b>&lt;117</b>	ug/L	500	117	2	10/25/19 05:58	10/26/19 12:59	7429-90-5	D3
Antimony, Dissolved	<b>0.40J</b>	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 12:59	7440-36-0	D3
Copper, Dissolved	<b>&lt;2.2</b>	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 12:59	7440-50-8	D3
Iron, Dissolved	<b>3890</b>	ug/L	500	116	2	10/25/19 05:58	10/26/19 12:59	7439-89-6	
Manganese, Dissolved	<b>724</b>	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 01:43	7439-96-5	
Nickel, Dissolved	<b>1.1J</b>	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 12:59	7440-02-0	D3
Silver, Dissolved	<b>&lt;0.25</b>	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 12:59	7440-22-4	D3
Vanadium, Dissolved	<b>1.6J</b>	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 12:59	7440-62-2	D3
Zinc, Dissolved	<b>&lt;20.7</b>	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 12:59	7440-66-6	D3
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
Anthracene	<b>0.021J</b>	ug/L	0.051	0.010	1	10/25/19 08:00	10/28/19 10:33	120-12-7	
Benzo(a)pyrene	<b>&lt;0.010</b>	ug/L	0.052	0.010	1	10/25/19 08:00	10/28/19 10:33	50-32-8	
Benzo(b)fluoranthene	<b>0.0071J</b>	ug/L	0.028	0.0056	1	10/25/19 08:00	10/28/19 10:33	205-99-2	
Benzo(g,h,i)perylene	<b>&lt;0.0066</b>	ug/L	0.033	0.0066	1	10/25/19 08:00	10/28/19 10:33	191-24-2	
Chrysene	<b>&lt;0.013</b>	ug/L	0.064	0.013	1	10/25/19 08:00	10/28/19 10:33	218-01-9	
Fluoranthene	<b>0.033J</b>	ug/L	0.052	0.010	1	10/25/19 08:00	10/28/19 10:33	206-44-0	
Fluorene	<b>0.13</b>	ug/L	0.039	0.0078	1	10/25/19 08:00	10/28/19 10:33	86-73-7	
Naphthalene	<b>0.021J</b>	ug/L	0.090	0.018	1	10/25/19 08:00	10/28/19 10:33	91-20-3	
Phenanthrene	<b>&lt;0.014</b>	ug/L	0.068	0.014	1	10/25/19 08:00	10/28/19 10:33	85-01-8	
Pyrene	<b>0.036J</b>	ug/L	0.038	0.0075	1	10/25/19 08:00	10/28/19 10:33	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	69	%	30-85		1	10/25/19 08:00	10/28/19 10:33	321-60-8	

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

**Sample: 102219018**      **Lab ID: 40197837018**      Collected: 10/22/19 13:38      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
<b>Surrogates</b>									
Terphenyl-d14 (S)	100	%	10-120		1	10/25/19 08:00	10/28/19 10:33	1718-51-0	
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/25/19 02:44	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/25/19 02:44	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/25/19 02:44	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/25/19 02:44	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/25/19 02:44	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/25/19 02:44	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	90	%	70-130		1		10/25/19 02:44	1868-53-7	
Toluene-d8 (S)	93	%	70-130		1		10/25/19 02:44	2037-26-5	
4-Bromofluorobenzene (S)	92	%	70-130		1		10/25/19 02:44	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	57.7	mg/L	3.0	1.0	1		11/05/19 00:41	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	391	mg/L	238	71.5	5		11/04/19 11:18		
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	<0.095	mg/L	0.25	0.095	1		11/01/19 11:42		

**Sample: 102219019**      **Lab ID: 40197837019**      Collected: 10/22/19 14:17      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified									
Methane	9020	ug/L	112	26.6	40		11/05/19 12:19	74-82-8	
<b>6020 MET ICPMS, Dissolved</b> Analytical Method: EPA 6020      Preparation Method: EPA 3010									
Aluminum, Dissolved	<117	ug/L	500	117	2	10/25/19 05:58	10/26/19 13:06	7429-90-5	D3
Antimony, Dissolved	<0.30	ug/L	2.0	0.30	2	10/25/19 05:58	10/26/19 13:06	7440-36-0	D3
Copper, Dissolved	<2.2	ug/L	7.3	2.2	2	10/25/19 05:58	10/26/19 13:06	7440-50-8	D3
Iron, Dissolved	32800	ug/L	500	116	2	10/25/19 05:58	10/26/19 13:06	7439-89-6	
Manganese, Dissolved	720	ug/L	40.5	12.2	10	10/25/19 05:58	10/29/19 01:50	7439-96-5	
Nickel, Dissolved	0.93J	ug/L	2.0	0.57	2	10/25/19 05:58	10/26/19 13:06	7440-02-0	D3
Silver, Dissolved	<0.25	ug/L	1.0	0.25	2	10/25/19 05:58	10/26/19 13:06	7440-22-4	D3
Vanadium, Dissolved	2.3	ug/L	2.1	0.63	2	10/25/19 05:58	10/26/19 13:06	7440-62-2	
Zinc, Dissolved	<20.7	ug/L	68.9	20.7	2	10/25/19 05:58	10/26/19 13:06	7440-66-6	D3

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

**Sample: 102219019**      **Lab ID: 40197837019**      Collected: 10/22/19 14:17      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by HVI</b> Analytical Method: EPA 8270 by HVI      Preparation Method: EPA 3510									
Anthracene	5.9	ug/L	2.2	0.44	40	10/25/19 08:00	10/25/19 20:04	120-12-7	
Benzo(a)pyrene	<0.45	ug/L	2.2	0.45	40	10/25/19 08:00	10/25/19 20:04	50-32-8	
Benzo(b)fluoranthene	<0.24	ug/L	1.2	0.24	40	10/25/19 08:00	10/25/19 20:04	205-99-2	
Benzo(g,h,i)perylene	<0.29	ug/L	1.4	0.29	40	10/25/19 08:00	10/25/19 20:04	191-24-2	
Chrysene	<0.56	ug/L	2.8	0.56	40	10/25/19 08:00	10/25/19 20:04	218-01-9	
Fluoranthene	2.3	ug/L	2.3	0.45	40	10/25/19 08:00	10/25/19 20:04	206-44-0	
Fluorene	22.5	ug/L	1.7	0.34	40	10/25/19 08:00	10/25/19 20:04	86-73-7	
Naphthalene	508	ug/L	3.9	0.78	40	10/25/19 08:00	10/25/19 20:04	91-20-3	
Phenanthrene	20.0	ug/L	2.9	0.59	40	10/25/19 08:00	10/25/19 20:04	85-01-8	
Pyrene	2.2	ug/L	1.6	0.33	40	10/25/19 08:00	10/25/19 20:04	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	47	%	30-85		40	10/25/19 08:00	10/25/19 20:04	321-60-8	
Terphenyl-d14 (S)	85	%	10-120		40	10/25/19 08:00	10/25/19 20:04	1718-51-0	
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	101	ug/L	5.0	1.2	5		10/24/19 20:32	71-43-2	
Ethylbenzene	105	ug/L	5.0	1.1	5		10/24/19 20:32	100-41-4	
Toluene	4.1J	ug/L	25.0	0.86	5		10/24/19 20:32	108-88-3	
Xylene (Total)	68.8	ug/L	15.0	7.5	5		10/24/19 20:32	1330-20-7	
m&p-Xylene	11.9	ug/L	10.0	2.3	5		10/24/19 20:32	179601-23-1	
o-Xylene	56.8	ug/L	5.0	1.3	5		10/24/19 20:32	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	92	%	70-130		5		10/24/19 20:32	1868-53-7	D3
Toluene-d8 (S)	94	%	70-130		5		10/24/19 20:32	2037-26-5	
4-Bromofluorobenzene (S)	100	%	70-130		5		10/24/19 20:32	460-00-4	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0									
Sulfate	<5.0	mg/L	15.0	5.0	5		11/05/19 00:54	14808-79-8	D3
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2									
Alkalinity, Total as CaCO3	726	mg/L	238	71.5	5		11/04/19 11:18		
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2									
Nitrogen, NO2 plus NO3	<0.095	mg/L	0.25	0.095	1		11/01/19 11:42		

**Sample: 102219020**      **Lab ID: 40197837020**      Collected: 10/22/19 14:40      Received: 10/23/19 12:45      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/25/19 03:05	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/25/19 03:05	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/25/19 03:05	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/25/19 03:05	1330-20-7	

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### ANALYTICAL RESULTS

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

Sample: 102219020      Lab ID: 40197837020      Collected: 10/22/19 14:40      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/25/19 03:05	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/25/19 03:05	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	93	%	70-130		1		10/25/19 03:05	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		10/25/19 03:05	2037-26-5	
4-Bromofluorobenzene (S)	93	%	70-130		1		10/25/19 03:05	460-00-4	

Sample: 102219021      Lab ID: 40197837021      Collected: 10/22/19 00:00      Received: 10/23/19 12:45      Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b> Analytical Method: EPA 8260									
Benzene	<0.25	ug/L	1.0	0.25	1		10/24/19 19:28	71-43-2	
Ethylbenzene	<0.22	ug/L	1.0	0.22	1		10/24/19 19:28	100-41-4	
Toluene	<0.17	ug/L	5.0	0.17	1		10/24/19 19:28	108-88-3	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		10/24/19 19:28	1330-20-7	
m&p-Xylene	<0.47	ug/L	2.0	0.47	1		10/24/19 19:28	179601-23-1	
o-Xylene	<0.26	ug/L	1.0	0.26	1		10/24/19 19:28	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	92	%	70-130		1		10/24/19 19:28	1868-53-7	
Toluene-d8 (S)	108	%	70-130		1		10/24/19 19:28	2037-26-5	
4-Bromofluorobenzene (S)	107	%	70-130		1		10/24/19 19:28	460-00-4	

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

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QC Batch: 338977 Analysis Method: EPA 8015B Modified  
QC Batch Method: EPA 8015B Modified Analysis Description: Methane, Ethane, Ethene GCV  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006, 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837015, 40197837016, 40197837017

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METHOD BLANK: 1968871 Matrix: Water  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006, 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837015, 40197837016, 40197837017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methane	ug/L	<0.66	2.8	10/29/19 07:20	

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LABORATORY CONTROL SAMPLE & LCSD: 1968872 1968873

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	28.6	28.4	28.1	99	98	80-120	1	20	

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MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1968874 1968875

Parameter	Units	40197837002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Methane	ug/L	1630	286	286	2040	2240	146	216	77-122	9	20	M1

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

QC Batch: 339649 Analysis Method: EPA 8015B Modified  
QC Batch Method: EPA 8015B Modified Analysis Description: Methane, Ethane, Ethene GCV  
Associated Lab Samples: 40197837018, 40197837019

METHOD BLANK: 1972505 Matrix: Water  
Associated Lab Samples: 40197837018, 40197837019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methane	ug/L	<0.66	2.8	11/05/19 08:12	

LABORATORY CONTROL SAMPLE & LCSD: 1972506 1972507

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	28.6	26.9	28.4	94	100	80-120	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1972508 1972509

Parameter	Units	40197839001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Methane	ug/L	15.1	28.6	28.6	61.3	61.7	162	163	77-122	1	20	M1

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

QC Batch: 338681 Analysis Method: EPA 6020  
QC Batch Method: EPA 3010 Analysis Description: 6020 MET Dissolved  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006, 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837015, 40197837016, 40197837017, 40197837018, 40197837019

METHOD BLANK: 1967312 Matrix: Water  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006, 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837015, 40197837016, 40197837017, 40197837018, 40197837019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	<58.7	250	10/26/19 10:00	
Antimony, Dissolved	ug/L	<0.15	1.0	10/26/19 10:00	
Copper, Dissolved	ug/L	<1.1	3.6	10/26/19 10:00	
Iron, Dissolved	ug/L	<58.0	250	10/26/19 10:00	
Manganese, Dissolved	ug/L	<1.2	4.0	10/28/19 22:46	
Nickel, Dissolved	ug/L	<0.28	1.0	10/26/19 10:00	
Silver, Dissolved	ug/L	<0.13	0.50	10/26/19 10:00	
Vanadium, Dissolved	ug/L	<0.32	1.0	10/26/19 10:00	
Zinc, Dissolved	ug/L	<10.3	34.4	10/26/19 10:00	

LABORATORY CONTROL SAMPLE: 1967313

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	5000	5100	102	80-120	
Antimony, Dissolved	ug/L	500	516	103	80-120	
Copper, Dissolved	ug/L	500	488	98	80-120	
Iron, Dissolved	ug/L	5000	5010	100	80-120	
Manganese, Dissolved	ug/L	500	478	96	80-120	
Nickel, Dissolved	ug/L	500	485	97	80-120	
Silver, Dissolved	ug/L	250	255	102	80-120	
Vanadium, Dissolved	ug/L	500	483	97	80-120	
Zinc, Dissolved	ug/L	500	505	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1967314 1967315

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40197837002 Result	Spike Conc.	Spike Conc.	Conc.								
Aluminum, Dissolved	ug/L	<117	5000	5000	4970	5070	99	101	75-125	2	20		
Antimony, Dissolved	ug/L	1.0J	500	500	523	527	104	105	75-125	1	20		
Copper, Dissolved	ug/L	<2.2	500	500	475	478	95	95	75-125	1	20		
Iron, Dissolved	ug/L	987	5000	5000	5950	6000	99	100	75-125	1	20		
Manganese, Dissolved	ug/L	1460	500	500	1940	1970	97	103	75-125	2	20		
Nickel, Dissolved	ug/L	3.5	500	500	478	478	95	95	75-125	0	20		
Silver, Dissolved	ug/L	<0.25	250	250	249	250	100	100	75-125	0	20		
Vanadium, Dissolved	ug/L	1.3J	500	500	494	498	99	99	75-125	1	20		

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1967314												1967315	
Parameter	Units	40197837002 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Zinc, Dissolved	ug/L	<20.7	500	500	498	506	99	100	75-125	2	20		

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

QC Batch: 338583 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006, 40197837007, 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837015, 40197837016, 40197837017, 40197837018, 40197837019, 40197837020

METHOD BLANK: 1966371 Matrix: Water  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006, 40197837007, 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837015, 40197837016, 40197837017, 40197837018, 40197837019, 40197837020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.25	1.0	10/24/19 16:32	
Ethylbenzene	ug/L	<0.22	1.0	10/24/19 16:32	
m&p-Xylene	ug/L	<0.47	2.0	10/24/19 16:32	
o-Xylene	ug/L	<0.26	1.0	10/24/19 16:32	
Toluene	ug/L	<0.17	5.0	10/24/19 16:32	
Xylene (Total)	ug/L	<1.5	3.0	10/24/19 16:32	
4-Bromofluorobenzene (S)	%	93	70-130	10/24/19 16:32	
Dibromofluoromethane (S)	%	93	70-130	10/24/19 16:32	
Toluene-d8 (S)	%	96	70-130	10/24/19 16:32	

LABORATORY CONTROL SAMPLE: 1966372

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	53.6	107	70-130	
Ethylbenzene	ug/L	50	58.7	117	80-124	
m&p-Xylene	ug/L	100	124	124	70-130	
o-Xylene	ug/L	50	60.8	122	70-130	
Toluene	ug/L	50	54.0	108	80-126	
Xylene (Total)	ug/L	150	185	123	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Dibromofluoromethane (S)	%			92	70-130	
Toluene-d8 (S)	%			94	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1966373 1966374

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40197837002 Result	Spike Conc.	Spike Conc.	MSD Conc.								
Benzene	ug/L	11.7	50	50	61.5	65.5	100	108	70-130	6	20		
Ethylbenzene	ug/L	1.3	50	50	59.3	60.9	116	119	80-125	3	20		
m&p-Xylene	ug/L	0.81J	100	100	123	126	122	126	70-130	3	20		
o-Xylene	ug/L	1.6	50	50	61.8	62.4	120	122	70-130	1	20		
Toluene	ug/L	0.47J	50	50	54.3	55.1	108	109	80-131	2	20		
Xylene (Total)	ug/L	2.4J	150	150	185	189	122	124	70-130	2	20		
4-Bromofluorobenzene (S)	%						108	107	70-130				
Dibromofluoromethane (S)	%						89	89	70-130				

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1966373												1966374	
Parameter	Units	40197837002 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Toluene-d8 (S)	%						97	96	70-130				

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

QC Batch: 338586 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
Associated Lab Samples: 40197837021

METHOD BLANK: 1966379 Matrix: Water  
Associated Lab Samples: 40197837021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.25	1.0	10/24/19 17:35	
Ethylbenzene	ug/L	<0.22	1.0	10/24/19 17:35	
m&p-Xylene	ug/L	<0.47	2.0	10/24/19 17:35	
o-Xylene	ug/L	<0.26	1.0	10/24/19 17:35	
Toluene	ug/L	<0.17	5.0	10/24/19 17:35	
Xylene (Total)	ug/L	<1.5	3.0	10/24/19 17:35	
4-Bromofluorobenzene (S)	%	107	70-130	10/24/19 17:35	
Dibromofluoromethane (S)	%	96	70-130	10/24/19 17:35	
Toluene-d8 (S)	%	108	70-130	10/24/19 17:35	

LABORATORY CONTROL SAMPLE: 1966380

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	41.2	82	70-130	
Ethylbenzene	ug/L	50	59.8	120	80-124	
m&p-Xylene	ug/L	100	117	117	70-130	
o-Xylene	ug/L	50	58.8	118	70-130	
Toluene	ug/L	50	53.6	107	80-126	
Xylene (Total)	ug/L	150	175	117	70-130	
4-Bromofluorobenzene (S)	%			113	70-130	
Dibromofluoromethane (S)	%			93	70-130	
Toluene-d8 (S)	%			108	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1966543 1966544

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40197812008 Result	Spike Conc.	Spike Conc.	Conc.								
Benzene	ug/L	<1.0	50	50	50	43.0	41.7	85	82	70-130	3	20	
Ethylbenzene	ug/L	59.1	50	50	50	121	120	125	122	80-125	1	20	
m&p-Xylene	ug/L	42.1	100	100	100	161	158	119	116	70-130	2	20	
o-Xylene	ug/L	<1.0	50	50	50	59.2	56.7	118	113	70-130	4	20	
Toluene	ug/L	<5.0	50	50	50	53.7	51.9	107	103	80-131	3	20	
Xylene (Total)	ug/L	42.3	150	150	150	220	215	119	115	70-130	3	20	
4-Bromofluorobenzene (S)	%							112	112	70-130			
Dibromofluoromethane (S)	%							94	93	70-130			
Toluene-d8 (S)	%							107	108	70-130			

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

QC Batch: 338615 Analysis Method: EPA 8270 by HVI  
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH by HVI  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006, 40197837008, 40197837009, 40197837010

METHOD BLANK: 1966604 Matrix: Water  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006, 40197837008, 40197837009, 40197837010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Anthracene	ug/L	<0.010	0.052	10/24/19 15:42	
Benzo(a)pyrene	ug/L	<0.011	0.053	10/24/19 15:42	
Benzo(b)fluoranthene	ug/L	<0.0057	0.029	10/24/19 15:42	
Benzo(g,h,i)perylene	ug/L	<0.0068	0.034	10/24/19 15:42	
Chrysene	ug/L	<0.013	0.065	10/24/19 15:42	
Fluoranthene	ug/L	<0.011	0.053	10/24/19 15:42	
Fluorene	ug/L	<0.0080	0.040	10/24/19 15:42	
Naphthalene	ug/L	<0.018	0.092	10/24/19 15:42	
Phenanthrene	ug/L	<0.014	0.069	10/24/19 15:42	
Pyrene	ug/L	<0.0076	0.038	10/24/19 15:42	
2-Fluorobiphenyl (S)	%	73	30-85	10/24/19 15:42	
Terphenyl-d14 (S)	%	111	10-120	10/24/19 15:42	

LABORATORY CONTROL SAMPLE: 1966605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Anthracene	ug/L	2	1.6	79	52-105	
Benzo(a)pyrene	ug/L	2	1.9	96	57-117	
Benzo(b)fluoranthene	ug/L	2	1.6	78	54-117	
Benzo(g,h,i)perylene	ug/L	2	1.2	60	32-82	
Chrysene	ug/L	2	2.2	111	63-122	
Fluoranthene	ug/L	2	1.6	79	52-112	
Fluorene	ug/L	2	1.5	74	46-116	
Naphthalene	ug/L	2	1.4	71	37-84	
Phenanthrene	ug/L	2	1.6	78	50-104	
Pyrene	ug/L	2	2.1	106	57-123	
2-Fluorobiphenyl (S)	%			75	30-85	
Terphenyl-d14 (S)	%			120	10-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1966606 1966607

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40197837002 Result	Spike Conc.	Spike Conc.	Result							Result
Anthracene	ug/L	0.078	1.9	1.9	1.3	1.4	65	68	27-107	4	34	
Benzo(a)pyrene	ug/L	<0.011	1.9	1.9	1.2	1.2	61	64	10-117	5	50	
Benzo(b)fluoranthene	ug/L	<0.0060	1.9	1.9	0.99	1.0	52	53	10-121	2	49	
Benzo(g,h,i)perylene	ug/L	<0.0071	1.9	1.9	0.58	0.69	30	36	10-82	17	50	

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1966606		1966607		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40197837002 Result	MS Spike Conc.	MSD Spike Conc.									
Chrysene	ug/L	<0.014	1.9	1.9	1.7	1.7	88	91	17-122	3	36		
Fluoranthene	ug/L	0.021J	1.9	1.9	1.2	1.2	62	64	27-112	3	42		
Fluorene	ug/L	0.073	1.9	1.9	1.2	1.3	61	63	38-116	2	29		
Naphthalene	ug/L	2.8	1.9	1.9	4.0	3.9	66	59	35-85	3	28		
Phenanthrene	ug/L	0.028J	1.9	1.9	1.3	1.3	65	68	31-106	4	42		
Pyrene	ug/L	0.014J	1.9	1.9	1.7	1.7	86	87	30-123	2	31		
2-Fluorobiphenyl (S)	%						62	61	30-85				
Terphenyl-d14 (S)	%						92	86	10-120				

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

QC Batch: 338692 Analysis Method: EPA 8270 by HVI  
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH by HVI  
Associated Lab Samples: 40197837011, 40197837012, 40197837013, 40197837014, 40197837015, 40197837016, 40197837017, 40197837018, 40197837019

METHOD BLANK: 1967347 Matrix: Water  
Associated Lab Samples: 40197837011, 40197837012, 40197837013, 40197837014, 40197837015, 40197837016, 40197837017, 40197837018, 40197837019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Anthracene	ug/L	<0.010	0.052	10/25/19 11:18	
Benzo(a)pyrene	ug/L	<0.011	0.053	10/25/19 11:18	
Benzo(b)fluoranthene	ug/L	<0.0057	0.029	10/25/19 11:18	
Benzo(g,h,i)perylene	ug/L	<0.0068	0.034	10/25/19 11:18	
Chrysene	ug/L	<0.013	0.065	10/25/19 11:18	
Fluoranthene	ug/L	<0.011	0.053	10/25/19 11:18	
Fluorene	ug/L	<0.0080	0.040	10/25/19 11:18	
Naphthalene	ug/L	<0.018	0.092	10/25/19 11:18	
Phenanthrene	ug/L	<0.014	0.069	10/25/19 11:18	
Pyrene	ug/L	<0.0076	0.038	10/25/19 11:18	
2-Fluorobiphenyl (S)	%	72	30-85	10/25/19 11:18	
Terphenyl-d14 (S)	%	98	10-120	10/25/19 11:18	

LABORATORY CONTROL SAMPLE: 1967348

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Anthracene	ug/L	2	1.9	94	52-105	
Benzo(a)pyrene	ug/L	2	1.9	95	57-117	
Benzo(b)fluoranthene	ug/L	2	1.5	75	54-117	
Benzo(g,h,i)perylene	ug/L	2	1.1	57	32-82	
Chrysene	ug/L	2	2.3	114	63-122	
Fluoranthene	ug/L	2	1.8	89	52-112	
Fluorene	ug/L	2	1.6	78	46-116	
Naphthalene	ug/L	2	1.4	72	37-84	
Phenanthrene	ug/L	2	1.5	77	50-104	
Pyrene	ug/L	2	1.7	86	57-123	
2-Fluorobiphenyl (S)	%			75	30-85	
Terphenyl-d14 (S)	%			97	10-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1967349 1967350

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40197839001 Result	Spike Conc.	Spike Conc.	Conc.								
Anthracene	ug/L	0.011J	2.1	2	1.9	1.6	88	80	27-107	15	34		
Benzo(a)pyrene	ug/L	<0.011	2.1	2	1.5	1.3	69	64	10-117	12	50		
Benzo(b)fluoranthene	ug/L	<0.0059	2.1	2	1.0	0.88	49	44	10-121	17	49		
Benzo(g,h,i)perylene	ug/L	<0.0070	2.1	2	0.66	0.55	31	27	10-82	18	50		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

Parameter	Units	1967349		1967350		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40197839001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Chrysene	ug/L	<0.013	2.1	2	2.3	2.0	106	99	17-122	13	36		
Fluoranthene	ug/L	<0.011	2.1	2	1.7	1.5	80	72	27-112	16	42		
Fluorene	ug/L	<0.0082	2.1	2	1.4	1.3	68	66	38-116	8	29		
Naphthalene	ug/L	<0.019	2.1	2	1.4	1.3	64	65	35-85	5	28		
Phenanthrene	ug/L	<0.014	2.1	2	1.4	1.2	65	61	31-106	12	42		
Pyrene	ug/L	<0.0079	2.1	2	1.7	1.5	77	73	30-123	12	31		
2-Fluorobiphenyl (S)	%						66	66	30-85				
Terphenyl-d14 (S)	%						80	77	10-120				

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

QC Batch: 339094 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006, 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837016, 40197837017, 40197837018, 40197837019

METHOD BLANK: 1969425 Matrix: Water  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006, 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837016, 40197837017, 40197837018, 40197837019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	<1.0	3.0	11/04/19 18:26	

LABORATORY CONTROL SAMPLE: 1969426

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.8	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1969427 1969428

Parameter	Units	40197837002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Sulfate	mg/L	37.7	20	20	57.8	58.1	101	102	90-110	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1969429 1969430

Parameter	Units	40197839001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Sulfate	mg/L	28.7	20	20	49.1	49.0	102	101	90-110	0	15	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

QC Batch: 339184 Analysis Method: EPA 310.2  
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006

METHOD BLANK: 1969893 Matrix: Water  
Associated Lab Samples: 40197837001, 40197837002, 40197837003, 40197837004, 40197837005, 40197837006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<14.3	47.7	10/30/19 14:02	

LABORATORY CONTROL SAMPLE: 1969894

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	98.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1969895 1969896

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result								
Alkalinity, Total as CaCO3	mg/L	476	500	500	914	894	88	84	90-110	2	20	M0	

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

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QC Batch: 339465 Analysis Method: EPA 310.2  
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity  
Associated Lab Samples: 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837016, 40197837017, 40197837018, 40197837019

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METHOD BLANK: 1971481 Matrix: Water  
Associated Lab Samples: 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837016, 40197837017, 40197837018, 40197837019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<14.3	47.7	11/04/19 11:06	

LABORATORY CONTROL SAMPLE: 1971482

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	92.4	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971483 1971484

Parameter	Units	40197837013 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Alkalinity, Total as CaCO3	mg/L	148J	500	584	565	87	83	90-110	3	20	M0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971485 1971486

Parameter	Units	40197839001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Alkalinity, Total as CaCO3	mg/L	314	500	766	776	90	92	90-110	1	20		

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

QC Batch: 339386 Analysis Method: EPA 353.2  
 QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
 Associated Lab Samples: 40197837001, 40197837002, 40197837003

METHOD BLANK: 1971058 Matrix: Water  
 Associated Lab Samples: 40197837001, 40197837002, 40197837003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.095	0.25	11/01/19 11:07	

LABORATORY CONTROL SAMPLE: 1971059

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971060 1971061

Parameter	Units	40197923002		1971061		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	6.8	2.5	9.2	2.5	93	93	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971062 1971063

Parameter	Units	40197837002		1971063		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	<0.095	2.5	2.4	2.5	97	98	90-110	1	20	

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### QUALITY CONTROL DATA

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

QC Batch: 339387 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Associated Lab Samples: 40197837004, 40197837005, 40197837006, 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837015, 40197837016, 40197837017, 40197837018, 40197837019

METHOD BLANK: 1971064 Matrix: Water  
Associated Lab Samples: 40197837004, 40197837005, 40197837006, 40197837008, 40197837009, 40197837010, 40197837011, 40197837012, 40197837013, 40197837014, 40197837015, 40197837016, 40197837017, 40197837018, 40197837019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.095	0.25	11/01/19 11:28	

LABORATORY CONTROL SAMPLE: 1971065

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971066 1971067

Parameter	Units	40197839001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.095	2.5	2.5	2.4	2.4	96	95	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1971068 1971069

Parameter	Units	40197839005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.095	2.5	2.5	2.3	2.3	93	94	90-110	1	20	

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## QUALIFIERS

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

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### 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, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

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

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

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40197837001	102119001	EPA 8015B Modified	338977		
40197837002	102119002	EPA 8015B Modified	338977		
40197837003	102119003	EPA 8015B Modified	338977		
40197837004	102119004	EPA 8015B Modified	338977		
40197837005	102119005	EPA 8015B Modified	338977		
40197837006	102119006	EPA 8015B Modified	338977		
40197837008	102219008	EPA 8015B Modified	338977		
40197837009	102219009	EPA 8015B Modified	338977		
40197837010	102219010	EPA 8015B Modified	338977		
40197837011	102219011	EPA 8015B Modified	338977		
40197837012	102219012	EPA 8015B Modified	338977		
40197837013	102219013	EPA 8015B Modified	338977		
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]		
40197837015	102219015	EPA 8015B Modified	338977		
40197837016	102219016	EPA 8015B Modified	338977		
40197837017	102219017	EPA 8015B Modified	338977		
40197837018	102219018	EPA 8015B Modified	339649		
40197837019	102219019	EPA 8015B Modified	339649		
40197837001	102119001	EPA 3010	338681	EPA 6020	338776
40197837002	102119002	EPA 3010	338681	EPA 6020	338776
40197837003	102119003	EPA 3010	338681	EPA 6020	338776
40197837004	102119004	EPA 3010	338681	EPA 6020	338776
40197837005	102119005	EPA 3010	338681	EPA 6020	338776
40197837006	102119006	EPA 3010	338681	EPA 6020	338776
40197837008	102219008	EPA 3010	338681	EPA 6020	338776
40197837009	102219009	EPA 3010	338681	EPA 6020	338776
40197837010	102219010	EPA 3010	338681	EPA 6020	338776
40197837011	102219011	EPA 3010	338681	EPA 6020	338776
40197837012	102219012	EPA 3010	338681	EPA 6020	338776
40197837013	102219013	EPA 3010	338681	EPA 6020	338776
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
40197837015	102219015	EPA 3010	338681	EPA 6020	338776
40197837016	102219016	EPA 3010	338681	EPA 6020	338776
40197837017	102219017	EPA 3010	338681	EPA 6020	338776
40197837018	102219018	EPA 3010	338681	EPA 6020	338776
40197837019	102219019	EPA 3010	338681	EPA 6020	338776
40197837001	102119001	EPA 3510	338615	EPA 8270 by HVI	338650
40197837002	102119002	EPA 3510	338615	EPA 8270 by HVI	338650
40197837003	102119003	EPA 3510	338615	EPA 8270 by HVI	338650
40197837004	102119004	EPA 3510	338615	EPA 8270 by HVI	338650
40197837005	102119005	EPA 3510	338615	EPA 8270 by HVI	338650
40197837006	102119006	EPA 3510	338615	EPA 8270 by HVI	338650
40197837008	102219008	EPA 3510	338615	EPA 8270 by HVI	338650
40197837009	102219009	EPA 3510	338615	EPA 8270 by HVI	338650
40197837010	102219010	EPA 3510	338615	EPA 8270 by HVI	338650
40197837011	102219011	EPA 3510	338692	EPA 8270 by HVI	338749
40197837012	102219012	EPA 3510	338692	EPA 8270 by HVI	338749

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 67979/232 MARINETTE FORMER MGP

Pace Project No.: 40197837

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40197837013	102219013	EPA 3510	338692	EPA 8270 by HVI	338749
40197837015	102219015	EPA 3510	338692	EPA 8270 by HVI	338749
40197837016	102219016	EPA 3510	338692	EPA 8270 by HVI	338749
40197837017	102219017	EPA 3510	338692	EPA 8270 by HVI	338749
40197837018	102219018	EPA 3510	338692	EPA 8270 by HVI	338749
40197837019	102219019	EPA 3510	338692	EPA 8270 by HVI	338749
40197837001	102119001	EPA 8260	338583		
40197837002	102119002	EPA 8260	338583		
40197837003	102119003	EPA 8260	338583		
40197837004	102119004	EPA 8260	338583		
40197837005	102119005	EPA 8260	338583		
40197837006	102119006	EPA 8260	338583		
40197837007	102119007	EPA 8260	338583		
40197837008	102219008	EPA 8260	338583		
40197837009	102219009	EPA 8260	338583		
40197837010	102219010	EPA 8260	338583		
40197837011	102219011	EPA 8260	338583		
40197837012	102219012	EPA 8260	338583		
40197837013	102219013	EPA 8260	338583		
40197837015	102219015	EPA 8260	338583		
40197837016	102219016	EPA 8260	338583		
40197837017	102219017	EPA 8260	338583		
40197837018	102219018	EPA 8260	338583		
40197837019	102219019	EPA 8260	338583		
40197837020	102219020	EPA 8260	338583		
40197837021	102219021	EPA 8260	338586		
40197837001	102119001	EPA 300.0	339094		
40197837002	102119002	EPA 300.0	339094		
40197837003	102119003	EPA 300.0	339094		
40197837004	102119004	EPA 300.0	339094		
40197837005	102119005	EPA 300.0	339094		
40197837006	102119006	EPA 300.0	339094		
40197837008	102219008	EPA 300.0	339094		
40197837009	102219009	EPA 300.0	339094		
40197837010	102219010	EPA 300.0	339094		
40197837011	102219011	EPA 300.0	339094		
40197837012	102219012	EPA 300.0	339094		
40197837013	102219013	EPA 300.0	339094		
40197837016	102219016	EPA 300.0	339094		
40197837017	102219017	EPA 300.0	339094		
40197837018	102219018	EPA 300.0	339094		
40197837019	102219019	EPA 300.0	339094		
40197837001	102119001	EPA 310.2	339184		
40197837002	102119002	EPA 310.2	339184		

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 67979/232 MARINETTE FORMER MGP  
Pace Project No.: 40197837

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40197837003	102119003	EPA 310.2	339184		
40197837004	102119004	EPA 310.2	339184		
40197837005	102119005	EPA 310.2	339184		
40197837006	102119006	EPA 310.2	339184		
40197837008	102219008	EPA 310.2	339465		
40197837009	102219009	EPA 310.2	339465		
40197837010	102219010	EPA 310.2	339465		
40197837011	102219011	EPA 310.2	339465		
40197837012	102219012	EPA 310.2	339465		
40197837013	102219013	EPA 310.2	339465		
██████████	██████████	██████████	██████████		
40197837016	102219016	EPA 310.2	339465		
40197837017	102219017	EPA 310.2	339465		
40197837018	102219018	EPA 310.2	339465		
40197837019	102219019	EPA 310.2	339465		
40197837001	102119001	EPA 353.2	339386		
40197837002	102119002	EPA 353.2	339386		
40197837003	102119003	EPA 353.2	339386		
40197837004	102119004	EPA 353.2	339387		
40197837005	102119005	EPA 353.2	339387		
40197837006	102119006	EPA 353.2	339387		
40197837008	102219008	EPA 353.2	339387		
40197837009	102219009	EPA 353.2	339387		
40197837010	102219010	EPA 353.2	339387		
40197837011	102219011	EPA 353.2	339387		
40197837012	102219012	EPA 353.2	339387		
40197837013	102219013	EPA 353.2	339387		
██████████	██████████	██████████	██████████		
40197837015	102219015	EPA 353.2	339387		
40197837016	102219016	EPA 353.2	339387		
40197837017	102219017	EPA 353.2	339387		
40197837018	102219018	EPA 353.2	339387		
40197837019	102219019	EPA 353.2	339387		

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QC: ABB 10/23/19

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Dropped off at PACE Labs Green Bay

73068-1019-101

40197837

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<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:		<b>REGULATORY AGENCY</b>	
Company: O'Brien and Gere Engineers, Inc.		Report To: GDSdata@OBG.com		Attention: Accounts Payable		<input type="checkbox"/> NPDES <input checked="" type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER	
Address: 234 W. Florida St Milwaukee, WI		Copy To: Marcus Byker Alex Bartelme		Company Name: WEC Business Services, LLC		<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER	
Email To: GDSdata@OBG.com		Purchase Order No.: 3400010643		Address: PO Box 19800, Green Bay, WI 54307		<b>Site Location</b> STATE: WI	
Phone: 773-796-4359   Fax:		Project Name: Marinette Former MGP		Pace Quote Reference: 3400010643			
Requested Due Date/TAT: standard		Project Number: 73068/102		Pace Project Manager:			
				Pace Profile #:			

ITEM #	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOIL/SOLID SL OIL OL WIPE WP AIR AR OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analysis Test ↓	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.					
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	BTEX 8260B	Methane 8015B				PAH 8270-SIM	Metals 6020A *	Alkalinity 310.2	Sulfate 300.0	Nitrate & Nitrite 353.2
					DATE	TIME	DATE	TIME																				
1	102219013		GW	G			10-22-19	10:20	11	X	X	X	X	X	X	X	X	X	X	X	X	X		013				
2	102219014								11	X	X	X	X	X	X	X	X	X	X	X	X	X		014				
3	102219015								9	X	X	X	X	X	X	X	X	X	X	X	X	X		low volume (N+N) 015				
4	102219016								11	X	X	X	X	X	X	X	X	X	X	X	X	X		016				
5	102219017								11	X	X	X	X	X	X	X	X	X	X	X	X	X		017				
6	102219018								11	X	X	X	X	X	X	X	X	X	X	X	X	X		018				
7	102219019								11	X	X	X	X	X	X	X	X	X	X	X	X	X		019				
8	102219020								3	X	X	X	X	X	X	X	X	X	X	X	X	X		020				
9	102219021								2	X	X	X	X	X	X	X	X	X	X	X	X	X		021				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
EPA Level 2	Alizer Mughal / Ramboll	10-23-19	12:45	Alizer Pace	10/23/19	1245	ROI	Y	N	Y
*Dissolved Metals: Aluminum, Antimony, Copper, Iron, Manganese, Nickel, Silver, Vanadium, Zinc.										

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Alizer Mughal				
SIGNATURE of SAMPLER:	<i>Alizer Mughal</i>				
DATE Signed (MM/DD/YY):		10/22/19			

### Sample Preservation Receipt Form

Client Name: OBG

Project # 40197837

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

Initial when completed: scw Date/Time:

Lab Lot# of pH paper: 10US0891 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	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU								SP5T	ZPLC	GN	
001				2													6																	2.5 / 5 / 10
002				6						3			3	3			6																	2.5 / 5 / 10
003				2													6																	2.5 / 5 / 10
004				2													6																	2.5 / 5 / 10
005				2													6																	2.5 / 5 / 10
006				2													6																	2.5 / 5 / 10
007				2													6																	2.5 / 5 / 10
008				2													6																	2.5 / 5 / 10
009				2													6																	2.5 / 5 / 10
010				2													6																	2.5 / 5 / 10
011				2													6																	2.5 / 5 / 10
012				2													6																	2.5 / 5 / 10
013				2													6																	2.5 / 5 / 10
014				2													6																	2.5 / 5 / 10
015				2													5																	2.5 / 5 / 10
016				2													6																	2.5 / 5 / 10
017				2													6																	2.5 / 5 / 10
018				2													6																	2.5 / 5 / 10
019				2													6																	2.5 / 5 / 10
020																	3																	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	BP3B	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:	





 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: <b>F-GB-C-031-Rev.07</b>	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Client Name: OBG Project #: **WO#: 40197837**  
 Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walto  
 Client  Pace Other: \_\_\_\_\_  
 Tracking #: \_\_\_\_\_  
 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 - NA 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: 10-23-19  
 Initials: SW

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 checked="" 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 checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<u>10/23/19 SW</u> 015 - 250ml poly H2SO4 approx 90mls
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		<u>001 - 2 vials and F100mlag - FD 15</u> <u>102119002; time matches</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>433</u>		

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments   
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Project Manager Review: SS Date: 10-24-19