

### **ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS**

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This attachment contains the laboratory analytical reports prepared by BC Laboratories, Inc., of Bakersfield, California.



Date of Report: 11/08/2019

David Conner

Tidewater Inc.

3761 Attucks Drive

Powell, OH 43065

Client Project: [none]

BCL Project: JPL- GW Monitoring Wells

BCL Work Order: 1935138

Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/14/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

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BC Laboratories, Inc.

Chain of Custody Form

19-35138

**Required Fields**

Report To: Tidewater, Inc.  
 Client: David Corner  
 Attn: David Corner  
 Street Address: 3781 Alluluck Drive  
 City: Powell State: OH Zip: 43065  
 Phone: 628 289 5715 Fax: 614 792 2897  
 Email Address: david.corner@tidewater.net

Project Description: JPL-GW Monitoring  
 Project Code: 4Q19  
 Sampler(s): Blaine Tech

Analysis Requested:  
 VOCs EPA 524.2  
 TRM: Cr  
 Perchlorate  
 Hexavalent Cr6 -218.6 (mg/L)  
 Cl, NO3, NO2, SO4  
 Orthophosphate 365.1

**Billing**  
 Client: Tidewater  
 Attn: David Corner  
 Address: 3781 Alluluck Drive  
 City: Powell State: OH Zip: 43065  
 Are there any tests with holding times?  
 Yes  No  
 \*Standard Turnaround = 10

**Notes**  
 SHORT HOLDING TIME  
 CR 18 NO3 NO2 OP SS  
 BO C2 BOD MBAS COT

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 -218.6 (mg/L)	Cl, NO3, NO2, SO4	Orthophosphate 365.1
-1	TB-1-101419	10/14/19	0700	W	X	X	X	X	X	X
-2	MW-20-5		0930	W	X	X	X	X	X	X
-3	MW-20-4		0930	W	X	X	X	X	X	X
-4	BOP-1-4Q19		0946	W	X	X	X	X	X	X
-5	MW-20-3		1100	W	X	X	X	X	X	X
-6	MW-20-2		1130	W	X	X	X	X	X	X
-7	MW-19-5		1240	W	X	X	X	X	X	X
-8	MW-19-4		1310	W	X	X	X	X	X	X
-9	BOP-2-4Q19		1320	W	X	X	X	X	X	X
-10	MW-19-3		1405	W	X	X	X	X	X	X

Matrix Types: S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other

Turnaround # of working days:  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)

Lab TAT Approval: \_\_\_\_\_ \*Additional Charges May Apply

Comments: PLEASE NOTIFY WHICH SAMPLES TO USE FOR QC (MSMSD) 90% Level III and 10% Level IV data validation required; Level IV Notated on C of C NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (inform QC)

Cost Center:  
 1. Relinquished By: [Signature] Date: 10/14/19 Time: 1540  
 2. Relinquished By: [Signature] Date: 10-19-19 Time: 1800  
 3. Relinquishing By: [Signature] Date: 10-14-19 Time: 1800

Global ID: 10-14-19 1547

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327-4911 Fax: (661) 327-1918 www.bclabs.com

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Laboratories, Inc.

Chain of Custody Form

19-35138

Page 2 of 2

**Required Fields**

Report for: Tideswater, Inc.  
 Client: David Conner  
 Street Address: 3761 Allucias Drive  
 City: Powell State: OH Zip: 43065  
 Phone: (626) 298-5715 Fax: (614) 792-2897  
 Email Address: david.conner@tides2o.net

Project Description: JPL-GW Monitoring  
 Project Code: 4Q19  
 Sampler(s): Blaine Tech

Analysis Requested  
 VOCs EPA 524.2   
 TRM: Cr   
 Perchlorate   
 Hexavalent Cr6 -218.6 (mg/L)   
 Cl, NO3, NO2, SO4   
 Orthophosphate 365.1

Billing  
 Client: Tideswater  
 Attn: David Conner  
 Address: 3761 Allucias Drive  
 City: Powell State: OH Zip: 43065  
 Are there any tests with holding times less than or equal to 48 hours?  
 Yes  No  
 \*Standard Turnaround = 30

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 -218.6 (mg/L)	Cl, NO3, NO2, SO4	Orthophosphate 365.1
-11	MW-19-2	10/19/19	1435	W	X	X	X	X	X	X
-12	MW-19-1	10/19/19	1570	W	X	X	X	X	X	X
-13	EB-1-10/19/19	10/19/19	1515	W	X	X	X	X	X	X
-14	SB-1-10/19/19	10/19/19	1520	W	X	X	X	X	X	X

Matrix Types: S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other

Turnaround # of working days:  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)

Lab TAT Approval: \_\_\_\_\_ \*Additional Charges May Apply

Comments: PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MS/MSD)  
 90% Level III and 10% Level IV data validation required. Level IV Notated on C of C  
 NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (inform QC)

Global ID: 10-14-19 1510

1. Requisitioned By: [Signature] Date: 10/19/19 Time: 1540  
 2. Requisitioned By: [Signature] Date: 10/19/19 Time: 1800  
 3. Requisitioned By: [Signature] Date: 10-14-19 Time: 1800

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327-4911 Fax: (661) 327-1918 www.bclabs.com

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 24

Submission #: 19-35138

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10/14/19

Temperature: (A) 1.8 °C / (C) 1.2 °C Analyst Init: [Signature]

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	<u>094</u>	<u>A</u>								
40ml VOA VIAL	<u>096</u>		<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>ABC</u>	<u>A-F</u>
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/508/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: [Signature] Date/Time: 10/14/19 19:35

= Actual / C = Corrected



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 24  
 Submission #: 1935138 Date: 10/14/19

**SHIPPING INFORMATION**  
 Fed Ex  UPS  Ontrac  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO   
 W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10/14/19  
 Temperature: (A) 1.8 °C / (C) 1.2 °C Analyst Init: EMM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES <u>108</u>		D	D							
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup> <u>106</u>		E	E							
QT INORGANIC CHEMICAL METALS <u>104</u>										
INORGANIC CHEMICAL METALS 4oz / 8oz (16oz)		F	F							
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL <u>096</u>	ABC	ABC	ABC	ABC						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: EMM / EMM Date/Time: 10/14/19 19:35 Rev 21 05/23/2016  
 A = Actual / C = Corrected (S:\WPDoc\WordPerfect\LAB\_DOCS\FORMS\SISANRE\rev 20)





BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 of 4  
 Submission #: 19-35138

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_  
 SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_  
 FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO   
 Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10/14/18  
 Temperature: (A) 2.3 °C / (C) 1.7 °C Analyst Init: [Signature]

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES 248		D	D	D	D	D	D	D	D	D
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup> 106		E	E	E	E	E	E	E	E	E
QT INORGANIC CHEMICAL METALS 104										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		F	F	F	F	F	F	F	F	F
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: [Signature] Date/Time: 10-14 19:53  
 A = Actual / C = Corrected

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 of 4

Submission #: 19-35138

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10/14/1800  
 Temperature: (A) 2.3 °C (C) 1.7 °C Analyst Init: SWK

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	11	12	13	14	15	16	17	18	19	20
QT PE UNPRES	D	D								
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>	E	E								
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz	F	F								
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 5015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: SWK/SMM Date/Time: 10-14 11:53 Rev 21 05/23/2016  
 A = Actual / C = Corrected



Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1935138-01</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> TB-1-101419 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 07:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Trip Blank Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-1-101419 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

<b>1935138-02</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-20-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 08:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-20-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935138-03</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-20-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 09:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-20-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1935138-04</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> Dup-1-4Q19 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 09:40 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): Dup-1-4Q19 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935138-05</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-20-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 11:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-20-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935138-06</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-20-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 11:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-20-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935138-07</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-19-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 12:40 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-19-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935138-08</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-19-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 13:10 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-19-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935138-09</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> DUP-2-4Q19 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 13:20 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-2-4Q19 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935138-10</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-19-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 14:05 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-19-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935138-11</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-19-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 14:35 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-19-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935138-12</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-19-1 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 15:10 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-19-1 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935138-13</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> EB-1-101419 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 15:15 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-1-101419 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935138-14</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> SB-1-101419 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/14/2019 18:00 <b>Sampling Date:</b> 10/14/2019 15:20 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): SB-1-101419 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-01	<b>Client Sample Name:</b> NASA/JPL, TB-1-101419, 10/14/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-01	<b>Client Sample Name:</b> NASA/JPL, TB-1-101419, 10/14/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-01	<b>Client Sample Name:</b> NASA/JPL, TB-1-101419, 10/14/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 11:23	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-01	<b>Client Sample Name:</b> NASA/JPL, TB-1-101419, 10/14/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 11:23	MGC	MS-V5	1	B059690

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935138-02 Client Sample Name: NASA/JPL, MW-20-5, 10/14/2019 8:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935138-02		Client Sample Name: NASA/JPL, MW-20-5, 10/14/2019 8:30:00AM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
<b>Styrene</b>	<b>0.19</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.12</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
<b>Carbon disulfide</b>	<b>0.65</b>	<b>ug/L</b>	<b>1.0</b>	<b>0.48</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935138-02      **Client Sample Name:** NASA/JPL, MW-20-5, 10/14/2019 8:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 11:47	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-02	<b>Client Sample Name:</b> NASA/JPL, MW-20-5, 10/14/2019 8:30:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 11:47	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-02	<b>Client Sample Name:</b> NASA/JPL, MW-20-5, 10/14/2019 8:30:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 20:00	CMM	IC6	1	B061039

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-02	<b>Client Sample Name:</b> NASA/JPL, MW-20-5, 10/14/2019 8:30:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00012	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/16/19 13:00	10/16/19 15:06		MRC	IC-4	1	B059974
2	EPA-200.8	10/16/19 08:45	10/16/19 20:14		ARD	PE-EL2	1	B059704

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Reported: 11/08/2019 13:03
Project: JPL- GW Monitoring Wells
Project Number: [none]
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1935138-03) and Client Sample Name (NASA/JPL, MW-20-4, 10/14/2019 9:30:00AM, Blaine Tech)

Main data table with columns: Constituent, Result, Units, PQL, MDL, Method, MB Bias, Lab Quads, Run #. Lists various VOCs like Benzene, Bromobenzene, etc.

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935138-03 Client Sample Name: NASA/JPL, MW-20-4, 10/14/2019 9:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
<b>Carbon disulfide</b>	<b>0.69</b>	<b>ug/L</b>	<b>1.0</b>	<b>0.48</b>	<b>EPA-524.2</b>	ND	<b>J</b>	<b>1</b>
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-03	<b>Client Sample Name:</b> NASA/JPL, MW-20-4, 10/14/2019 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 12:12	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-03	<b>Client Sample Name:</b> NASA/JPL, MW-20-4, 10/14/2019 9:30:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 12:12	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-03	<b>Client Sample Name:</b> NASA/JPL, MW-20-4, 10/14/2019 9:30:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 20:15	CMM	IC6	1	B061039

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-03	<b>Client Sample Name:</b> NASA/JPL, MW-20-4, 10/14/2019 9:30:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000063	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/16/19 13:00	10/16/19 15:16		MRC	IC-4	1	B059974
2	EPA-200.8	10/16/19 08:45	10/16/19 20:16		ARD	PE-EL2	1	B059704

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935138-04 Client Sample Name: NASA/JPL, Dup-1-4Q19, 10/14/2019 9:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-04	<b>Client Sample Name:</b> NASA/JPL, Dup-1-4Q19, 10/14/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
<b>Carbon disulfide</b>	<b>0.50</b>	<b>ug/L</b>	<b>1.0</b>	<b>0.48</b>	<b>EPA-524.2</b>	ND	<b>J</b>	<b>1</b>
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935138-04      **Client Sample Name:** NASA/JPL, Dup-1-4Q19, 10/14/2019 9:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 12:36	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-04	<b>Client Sample Name:</b> NASA/JPL, Dup-1-4Q19, 10/14/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 12:36	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-04	<b>Client Sample Name:</b> NASA/JPL, Dup-1-4Q19, 10/14/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 21:01	CMM	IC6	1	B061039

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-04	<b>Client Sample Name:</b> NASA/JPL, Dup-1-4Q19, 10/14/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000066	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	0.57	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/16/19 13:00	10/16/19 15:26		MRC	IC-4	1	B059974
2	EPA-200.8	10/16/19 08:45	10/16/19 20:18		ARD	PE-EL2	1	B059704

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Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-05	<b>Client Sample Name:</b> NASA/JPL, MW-20-3, 10/14/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-05	<b>Client Sample Name:</b> NASA/JPL, MW-20-3, 10/14/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
<b>Styrene</b>	<b>0.32</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.12</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.37</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
<b>Acrylonitrile</b>	<b>1.9</b>	<b>ug/L</b>	<b>5.0</b>	<b>1.5</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
<b>Carbon disulfide</b>	<b>0.59</b>	<b>ug/L</b>	<b>1.0</b>	<b>0.48</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-05	<b>Client Sample Name:</b> NASA/JPL, MW-20-3, 10/14/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 13:00	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-05	<b>Client Sample Name:</b> NASA/JPL, MW-20-3, 10/14/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 13:00	MGC	MS-V5	1	B059690

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-05	<b>Client Sample Name:</b> NASA/JPL, MW-20-3, 10/14/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 21:16	CMM	IC6	1	B061039

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-05	<b>Client Sample Name:</b> NASA/JPL, MW-20-3, 10/14/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/16/19 13:00	10/16/19 15:35		MRC	IC-4	1	B059974
2	EPA-200.8	10/16/19 08:45	10/16/19 20:19		ARD	PE-EL2	1	B059704

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-06	<b>Client Sample Name:</b> NASA/JPL, MW-20-2, 10/14/2019 11:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.87</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-06	<b>Client Sample Name:</b> NASA/JPL, MW-20-2, 10/14/2019 11:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.26</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.55</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-06	<b>Client Sample Name:</b> NASA/JPL, MW-20-2, 10/14/2019 11:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	95.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 13:24	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-06	<b>Client Sample Name:</b> NASA/JPL, MW-20-2, 10/14/2019 11:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 13:24	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-06	<b>Client Sample Name:</b> NASA/JPL, MW-20-2, 10/14/2019 11:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.2	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 21:32	CMM	IC6	1	B061039

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-06	<b>Client Sample Name:</b> NASA/JPL, MW-20-2, 10/14/2019 11:30:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/16/19 13:00	10/16/19 16:04		MRC	IC-4	1	B059974
2	EPA-200.8	10/16/19 08:45	10/16/19 20:21		ARD	PE-EL2	1	B059704

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-07	<b>Client Sample Name:</b> NASA/JPL, MW-19-5, 10/14/2019 12:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>2.8</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-07	<b>Client Sample Name:</b> NASA/JPL, MW-19-5, 10/14/2019 12:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-07	<b>Client Sample Name:</b> NASA/JPL, MW-19-5, 10/14/2019 12:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 13:48	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-07	<b>Client Sample Name:</b> NASA/JPL, MW-19-5, 10/14/2019 12:40:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 13:48	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-07	<b>Client Sample Name:</b> NASA/JPL, MW-19-5, 10/14/2019 12:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.7	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 21:47	CMM	IC6	1	B061039

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-07	<b>Client Sample Name:</b> NASA/JPL, MW-19-5, 10/14/2019 12:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0019	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>2.2</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/16/19 13:00	10/16/19 16:14		MRC	IC-4	1	B059974
2	EPA-200.8	10/16/19 08:45	10/16/19 20:23		ARD	PE-EL2	1	B059704

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935138-08 Client Sample Name: NASA/JPL, MW-19-4, 10/14/2019 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.70</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935138-08 Client Sample Name: NASA/JPL, MW-19-4, 10/14/2019 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.30</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935138-08      **Client Sample Name:** NASA/JPL, MW-19-4, 10/14/2019 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 14:13	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-08	<b>Client Sample Name:</b> NASA/JPL, MW-19-4, 10/14/2019 1:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 14:13	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-08	<b>Client Sample Name:</b> NASA/JPL, MW-19-4, 10/14/2019 1:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.0	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 22:03	CMM	IC6	1	B061039

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-08	<b>Client Sample Name:</b> NASA/JPL, MW-19-4, 10/14/2019 1:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0026	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>2.2</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/16/19 13:00	10/16/19 16:23	MRC	IC-4	1	B059974
2	EPA-200.8	10/16/19 08:45	10/16/19 20:24	ARD	PE-EL2	1	B059704

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID:	1935138-09							
Client Sample Name:	NASA/JPL, DUP-2-4Q19, 10/14/2019 1:20:00PM, Blaine Tech							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.90</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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**Reported:** 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID:	1935138-09							Client Sample Name:	NASA/JPL, DUP-2-4Q19, 10/14/2019 1:20:00PM, Blaine Tech				
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #					
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1					
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1					
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1					
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1					
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1					
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1					
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1					
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1					
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1					
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1					
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1					
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1					
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1					
<b>Tetrachloroethene</b>	<b>0.46</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1					
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1					
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1					
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1					
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1					
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1					
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1					
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1					
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1					
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1					
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1					
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1					
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1					
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1					
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1					
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1					
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1					
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1					
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1					
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1					

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**Reported:** 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-09	<b>Client Sample Name:</b> NASA/JPL, DUP-2-4Q19, 10/14/2019 1:20:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 08:57	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-09	<b>Client Sample Name:</b> NASA/JPL, DUP-2-4Q19, 10/14/2019 1:20:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 08:57	MGC	MS-V5	1	B059690

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Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-09	<b>Client Sample Name:</b> NASA/JPL, DUP-2-4Q19, 10/14/2019 1:20:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.9	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 18:58	CMM	IC6	1	B061039

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-09	<b>Client Sample Name:</b> NASA/JPL, DUP-2-4Q19, 10/14/2019 1:20:00PM, Blaine Tech							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0026	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	2.4	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/16/19 13:00	10/16/19 14:28		MRC	IC-4	1	B059974
2	EPA-200.8	10/16/19 08:45	10/16/19 19:32		ARD	PE-EL2	1	B059704

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Reported: 11/08/2019 13:03
Project: JPL- GW Monitoring Wells
Project Number: [none]
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1935138-10) and Client Sample Name (NASA/JPL, MW-19-3, 10/14/2019 2:05:00PM, Blaine Tech)

Main data table with columns: Constituent, Result, Units, PQL, MDL, Method, MB Bias, Lab Quals, Run #. Lists various organic compounds and their detection results.

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Reported: 11/08/2019 13:03
Project: JPL- GW Monitoring Wells
Project Number: [none]
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1935138-10) and Client Sample Name (NASA/JPL, MW-19-3, 10/14/2019 2:05:00PM, Blaine Tech)

Main data table with columns: Constituent, Result, Units, PQL, MDL, Method, MB Bias, Lab Qualls, Run #. Lists various chemical compounds and their test results.

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-10	<b>Client Sample Name:</b> NASA/JPL, MW-19-3, 10/14/2019 2:05:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 14:37	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-10	<b>Client Sample Name:</b> NASA/JPL, MW-19-3, 10/14/2019 2:05:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 14:37	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-10	<b>Client Sample Name:</b> NASA/JPL, MW-19-3, 10/14/2019 2:05:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.5	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 22:18	CMM	IC6	1	B061039

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-10	<b>Client Sample Name:</b> NASA/JPL, MW-19-3, 10/14/2019 2:05:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0019	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	2.0	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/16/19 13:00	10/16/19 16:33		MRC	IC-4	1	B059974
2	EPA-200.8	10/16/19 08:45	10/16/19 20:26		ARD	PE-EL2	1	B059704

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935138-11      **Client Sample Name:** NASA/JPL, MW-19-2, 10/14/2019 2:35:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>1.9</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
<b>cis-1,2-Dichloroethene</b>	<b>0.32</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.27</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935138-11		Client Sample Name: NASA/JPL, MW-19-2, 10/14/2019 2:35:00PM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>1.5</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.76</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-11	<b>Client Sample Name:</b> NASA/JPL, MW-19-2, 10/14/2019 2:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 15:01	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-11	<b>Client Sample Name:</b> NASA/JPL, MW-19-2, 10/14/2019 2:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 15:01	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-11	<b>Client Sample Name:</b> NASA/JPL, MW-19-2, 10/14/2019 2:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.7	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 22:33	TMS	IC6	1	B061039

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-11	<b>Client Sample Name:</b> NASA/JPL, MW-19-2, 10/14/2019 2:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00091	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>1.5</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/16/19 16:00	10/16/19 17:01	MRC	IC-4	1	B059975
2	EPA-200.8	10/16/19 08:45	10/16/19 20:28	ARD	PE-EL2	1	B059704

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-12	<b>Client Sample Name:</b> NASA/JPL, MW-19-1, 10/14/2019 3:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.36</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-12	<b>Client Sample Name:</b> NASA/JPL, MW-19-1, 10/14/2019 3:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-12	<b>Client Sample Name:</b> NASA/JPL, MW-19-1, 10/14/2019 3:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 15:26	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-12	<b>Client Sample Name:</b> NASA/JPL, MW-19-1, 10/14/2019 3:10:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 15:26	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-12	<b>Client Sample Name:</b> NASA/JPL, MW-19-1, 10/14/2019 3:10:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 22:49	CMM	IC6	1	B061039

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**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-12	<b>Client Sample Name:</b> NASA/JPL, MW-19-1, 10/14/2019 3:10:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/16/19 16:00	10/16/19 17:59		MRC	IC-4	1	B059975
2	EPA-200.8	10/16/19 08:45	10/16/19 21:22		ARD	PE-EL2	1	B059705

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935138-13 Client Sample Name: NASA/JPL, EB-1-101419, 10/14/2019 3:15:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-13	<b>Client Sample Name:</b> NASA/JPL, EB-1-101419, 10/14/2019 3:15:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-13	<b>Client Sample Name:</b> NASA/JPL, EB-1-101419, 10/14/2019 3:15:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 15:50	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-13	<b>Client Sample Name:</b> NASA/JPL, EB-1-101419, 10/14/2019 3:15:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 15:50	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-13	<b>Client Sample Name:</b> NASA/JPL, EB-1-101419, 10/14/2019 3:15:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 23:04	CMM	IC6	1	B061039

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-13	<b>Client Sample Name:</b> NASA/JPL, EB-1-101419, 10/14/2019 3:15:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/16/19 16:00	10/16/19 18:09		MRC	IC-4	1	B059975
2	EPA-200.8	10/16/19 08:45	10/16/19 21:24		ARD	PE-EL2	1	B059705

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-14	<b>Client Sample Name:</b> NASA/JPL, SB-1-101419, 10/14/2019 3:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/08/2019 13:03
Project: JPL- GW Monitoring Wells
Project Number: [none]
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1935138-14) and Client Sample Name (NASA/JPL, SB-1-101419, 10/14/2019 3:20:00PM, Blaine Tech)

Main data table with columns: Constituent, Result, Units, PQL, MDL, Method, MB Bias, Lab Quals, Run #. Lists various chemical compounds and their analysis results.

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935138-14	<b>Client Sample Name:</b> NASA/JPL, SB-1-101419, 10/14/2019 3:20:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	95.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 16:14	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935138-14	<b>Client Sample Name:</b> NASA/JPL, SB-1-101419, 10/14/2019 3:20:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/16/19 07:00	10/16/19 16:14	MGC	MS-V5	1	B059690

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935138-14	<b>Client Sample Name:</b> NASA/JPL, SB-1-101419, 10/14/2019 3:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/19 19:00	11/01/19 23:19	CMM	IC6	1	B061039

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**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935138-14	<b>Client Sample Name:</b> NASA/JPL, SB-1-101419, 10/14/2019 3:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/16/19 16:00	10/16/19 18:18		MRC	IC-4	1	B059975
2	EPA-200.8	10/16/19 08:45	10/16/19 21:25		ARD	PE-EL2	1	B059705

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**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059690</b>						
Benzene	B059690-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B059690-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B059690-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B059690-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B059690-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B059690-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B059690-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B059690-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B059690-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B059690-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B059690-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B059690-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B059690-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B059690-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B059690-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B059690-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B059690-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B059690-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B059690-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B059690-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B059690-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B059690-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B059690-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B059690-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B059690-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B059690-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B059690-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B059690-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B059690-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B059690-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B059690-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B059690-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B059690-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B059690-BLK1	ND	ug/L	0.50	0.14	

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**Project Number:** [none]  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059690</b>						
trans-1,3-Dichloropropene	B059690-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B059690-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B059690-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B059690-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B059690-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B059690-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B059690-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B059690-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B059690-BLK1	ND	ug/L	0.50	0.12	
Styrene	B059690-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B059690-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B059690-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethane	B059690-BLK1	ND	ug/L	0.50	0.23	
Toluene	B059690-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B059690-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B059690-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B059690-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B059690-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B059690-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B059690-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B059690-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B059690-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B059690-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B059690-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B059690-BLK1	ND	ug/L	0.50	0.18	
Acetone	B059690-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B059690-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B059690-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B059690-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B059690-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B059690-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B059690-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B059690-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B059690-BLK1	ND	ug/L	4.0	1.3	

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**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059690</b>						
Ethyl t-butyl ether	B059690-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B059690-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B059690-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B059690-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B059690-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B059690-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B059690-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B059690-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B059690-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B059690-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B059690-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B059690-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B059690-BLK1	ND	ug/L	0.50	0.13	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>B059690-BLK1</b>	<b>104</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>B059690-BLK1</b>	<b>99.8</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>B059690-BLK1</b>	<b>103</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

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**Reported:** 11/08/2019 13:03  
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**Project Number:** [none]  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B059690</b>										
Benzene	B059690-BS1	LCS	24.180	25.000	ug/L	96.7		70 - 130		
Bromodichloromethane	B059690-BS1	LCS	27.970	25.000	ug/L	112		70 - 130		
Chlorobenzene	B059690-BS1	LCS	24.080	25.000	ug/L	96.3		70 - 130		
Chloroethane	B059690-BS1	LCS	26.730	25.000	ug/L	107		70 - 130		
1,4-Dichlorobenzene	B059690-BS1	LCS	23.610	25.000	ug/L	94.4		70 - 130		
1,1-Dichloroethane	B059690-BS1	LCS	26.970	25.000	ug/L	108		70 - 130		
1,1-Dichloroethene	B059690-BS1	LCS	26.420	25.000	ug/L	106		70 - 130		
Toluene	B059690-BS1	LCS	22.600	25.000	ug/L	90.4		70 - 130		
Trichloroethene	B059690-BS1	LCS	24.940	25.000	ug/L	99.8		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B059690-BS1	LCS	10.370	10.000	ug/L	104		75 - 125		
Toluene-d8 (Surrogate)	B059690-BS1	LCS	9.6400	10.000	ug/L	96.4		80 - 120		
4-Bromofluorobenzene (Surrogate)	B059690-BS1	LCS	10.090	10.000	ug/L	101		80 - 120		

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Reported: 11/08/2019 13:03  
Project: JPL- GW Monitoring Wells  
Project Number: [none]  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B059690</b>		Used client sample: Y - Description: DUP-2-4Q19, 10/14/2019 13:20								
Benzene	MS	1935138-09	ND	27.640	25.000	ug/L		111		70 - 130
	MSD	1935138-09	ND	27.520	25.000	ug/L	0.4	110	20	70 - 130
Bromodichloromethane	MS	1935138-09	ND	31.600	25.000	ug/L		126		70 - 130
	MSD	1935138-09	ND	31.510	25.000	ug/L	0.3	126	20	70 - 130
Chlorobenzene	MS	1935138-09	ND	27.320	25.000	ug/L		109		70 - 130
	MSD	1935138-09	ND	27.140	25.000	ug/L	0.7	109	20	70 - 130
Chloroethane	MS	1935138-09	ND	30.610	25.000	ug/L		122		70 - 130
	MSD	1935138-09	ND	30.350	25.000	ug/L	0.9	121	20	70 - 130
1,4-Dichlorobenzene	MS	1935138-09	ND	27.740	25.000	ug/L		111		70 - 130
	MSD	1935138-09	ND	28.210	25.000	ug/L	1.7	113	20	70 - 130
1,1-Dichloroethane	MS	1935138-09	ND	30.620	25.000	ug/L		122		70 - 130
	MSD	1935138-09	ND	30.430	25.000	ug/L	0.6	122	20	70 - 130
1,1-Dichloroethene	MS	1935138-09	ND	30.560	25.000	ug/L		122		70 - 130
	MSD	1935138-09	ND	29.980	25.000	ug/L	1.9	120	20	70 - 130
Toluene	MS	1935138-09	ND	26.400	25.000	ug/L		106		70 - 130
	MSD	1935138-09	ND	26.280	25.000	ug/L	0.5	105	20	70 - 130
Trichloroethene	MS	1935138-09	ND	28.760	25.000	ug/L		115		70 - 130
	MSD	1935138-09	ND	28.460	25.000	ug/L	1.0	114	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1935138-09	ND	10.330	10.000	ug/L		103		75 - 125
	MSD	1935138-09	ND	10.750	10.000	ug/L	4.0	108		75 - 125
Toluene-d8 (Surrogate)	MS	1935138-09	ND	9.9700	10.000	ug/L		99.7		80 - 120
	MSD	1935138-09	ND	9.7200	10.000	ug/L	2.5	97.2		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1935138-09	ND	10.120	10.000	ug/L		101		80 - 120
	MSD	1935138-09	ND	10.540	10.000	ug/L	4.1	105		80 - 120

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**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2) TICs

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059690</b>						
Chloroacetonitrile	B059690-BLK1	0	ug/L			
1-Chlorobutane	B059690-BLK1	0	ug/L			
1,1-Dichloropropanone	B059690-BLK1	0	ug/L			
Methyl acrylate	B059690-BLK1	0	ug/L			
Nitrobenzene	B059690-BLK1	0	ug/L			
2-Nitropropane	B059690-BLK1	0	ug/L			

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**Project Number:** [none]  
**Project Manager:** David Conner

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B061039</b>						
Perchlorate	B061039-BLK1	ND	ug/L	4.0	0.76	

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B061039</b>										
Perchlorate	B061039-BS1	LCS	9.9250	10.000	ug/L	99.2		85	115	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B061039</b>		Used client sample: Y - Description: DUP-2-4Q19, 10/14/2019 13:20								
Perchlorate	DUP	1935138-09	2.8594	2.8748		ug/L	0.5		15	J
	MS	1935138-09	2.8594	13.031	10.101	ug/L		101	80 - 120	
	MSD	1935138-09	2.8594	13.043	10.101	ug/L	0.1	101	15 80 - 120	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059704</b>						
Total Recoverable Chromium	B059704-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B059705</b>						
Total Recoverable Chromium	B059705-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B059974</b>						
Hexavalent Chromium	B059974-BLK1	ND	mg/L	0.00020	0.000032	
<b>QC Batch ID: B059975</b>						
Hexavalent Chromium	B059975-BLK1	ND	mg/L	0.00020	0.000032	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab	Quals
								Percent Recovery	RPD		
<b>QC Batch ID: B059704</b>											
Total Recoverable Chromium	B059704-BS1	LCS	40.827	40.000	ug/L	102		85	115		
<b>QC Batch ID: B059705</b>											
Total Recoverable Chromium	B059705-BS1	LCS	41.024	40.000	ug/L	103		85	115		
<b>QC Batch ID: B059974</b>											
Hexavalent Chromium	B059974-BS1	LCS	0.019407	0.020000	mg/L	97.0		90	110		
<b>QC Batch ID: B059975</b>											
Hexavalent Chromium	B059975-BS1	LCS	0.019368	0.020000	mg/L	96.8		90	110		

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B059704</b>		Used client sample: Y - Description: DUP-2-4Q19, 10/14/2019 13:20								
Total Recoverable Chromium	DUP	1935138-09	2.4040	2.3430		ug/L	2.6		20	J
	MS	1935138-09	2.4040	39.287	40.000	ug/L		92.2	70 - 130	
	MSD	1935138-09	2.4040	38.310	40.000	ug/L	2.5	89.8	20 70 - 130	
<b>QC Batch ID: B059705</b>		Used client sample: N								
Total Recoverable Chromium	DUP	1935139-01	ND	ND		ug/L			20	
	MS	1935139-01	ND	33.236	40.000	ug/L		83.1	70 - 130	
	MSD	1935139-01	ND	33.803	40.000	ug/L	1.7	84.5	20 70 - 130	
<b>QC Batch ID: B059974</b>		Used client sample: Y - Description: DUP-2-4Q19, 10/14/2019 13:20								
Hexavalent Chromium	DUP	1935138-09	0.0025560	0.0026000		mg/L	1.7		10	
	MS	1935138-09	0.0025560	0.021278	0.020202	mg/L		92.7	90 - 110	
	MSD	1935138-09	0.0025560	0.021289	0.020202	mg/L	0.1	92.7	10 90 - 110	
<b>QC Batch ID: B059975</b>		Used client sample: Y - Description: MW-19-2, 10/14/2019 14:35								
Hexavalent Chromium	DUP	1935138-11	0.00090900	0.00091000		mg/L	0.1		10	
	MS	1935138-11	0.00090900	0.021593	0.020202	mg/L		102	90 - 110	
	MSD	1935138-11	0.00090900	0.021042	0.020202	mg/L	2.6	99.7	10 90 - 110	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/08/2019 13:03  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** [none]  
**Project Manager:** David Conner

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- V11 The Continuing Calibration Verification (CCV) recovery was not within established control limits.



Date of Report: 11/12/2019

David Conner

Tidewater Inc.

3761 Attucks Drive  
Powell, OH 43065

Client Project: 4Q19  
BCL Project: JPL- GW Monitoring Wells  
BCL Work Order: 1935353  
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/15/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Chain of Custody Form

Page 1 of 2

**\*Required Fields**

Reason To: **Tidelwater, Inc.**  
 Client: **David Conner**  
 Attn: **David Conner**  
 Street Address: **3761 Allucks Drive**  
 City: **Powell** State: **OH** Zip: **43065**  
 Phone: **626 | 298 - 5715** Fax: **614 | 792 - 2897**  
 Email Address: **david.conner@tideh2o.net**  
 Submission #: **19-35353**

Project Description: **JPL-GW Monitoring**  
 Project Code: **4Q19**  
 Sampler (s): **Blaine Tech**

**Analysis Requested**

Sample #	Sample Description	Date	Time	Matrix*
-1	TB-2-101519	10/15/19	4700	W
-2	MW-14-5		0745	W
-3	MW-14-4		6220	W
-4	MW-14-3		0850	W
-5	MW-14-2		0930	W
-6	MW-25-5		1145	W
-7	MW-25-4		1245	W
-8	MW-25-3		1320	W
-9	DOP-3-4019		1330	W
-10	MW-25-2		1440	W
-11	MW-25-1		1515	W

**Analysis Requested**

Analysis Requested	Result
Orthophosphate 365.1	
CL, NO3, NO2, SO4	
Hexavalent Cr6 - 218.6 (mg/L)	
Perchlorate	
TRM: C	
VOCs EPA 524.2	

**Notes:**

FOR USE BY: **JPL**

FOR SHORT HOLDING TIME: **NO2 NO3 OP SS**

DO: **MBAS COT**

**Billing**

Client: **Tidelwater**  
 Attn: **David Conner**  
 Address: **3761 Allucks Drive**  
 City: **Powell** State: **OH** Zip: **43065**

Are there any tests with holding times? **less than or equal to 48 hours?**  
 Yes  No  
 \*Standard Turnaround = 10

**Matrix Types:** S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other

Turnaround # of working days:  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)

Lab TAT Approval: \_\_\_\_\_ \*Additional Charges May Apply

**Comments:**

PLEASE NOTATE WHICH SAMPLES TO USE FOR  
 QC (MS/MSD)  
 90% Level III and 10% Level IV data validation  
 required; Level IV Notated on C of C  
 NOTE: ALL ANALYSIS REQUIRED TO HAVE  
 CALIBRATION SUMMARIES (Inform QC)

MBU Site   
 CVX RCRA   
 Geotracker 5 File (CA Default)   
 Geotracker 2 File   
 Other (Specify) \_\_\_\_\_

**Cost Center:**

1. Relinquished By:	Date/Time	Global ID/Type
<i>[Signature]</i>	10/15/19 1555	10-15-19 1555
2. Relinquished By:	Date/Time	Date/Time
<i>[Signature]</i>	10-13-19 1800	10-15-19 1820
3. Relinquished By:	Date/Time	Date/Time
<i>[Signature]</i>		

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327 - 4911 Fax: (661) 327 - 1918 www.bclabs.com

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Chain of Custody Form

Page 2 of 2

**Required Fields**

Client: Tidewater, Inc.  
 Client: David Connor  
 Address: 3761 Allucks Drive  
 City: Powell State: OH Zip: 43065

Project Description: JPL-GW Monitoring  
 Project Code: 4Q19  
 Sampler(s): Blaine Tech

Phone: 626 | 288 - 5715 Fax: 614 | 792 - 2897  
 Email Address: david.connor@tideh2o.net

Submission #: 19-35353

Sample # Date Time Matrix  
 -12 EB-2-10/5/19 1530 W

**Analysis Requested**

Orthophosphate 365.1	
Cl, NO3, NO2, SO4	
Hexavalent Cr6 - 2186 (mg/L)	X
Perchlorate	X
TRM, Cr	X
VOCs EPA 524.2	X

**Billing**

Client: Tidewater  
 Attn: David Connor  
 Address: 3761 Allucks Drive  
 City: Powell State: OH Zip: 43065

Are there any tests with holding times?  
 less than or equal to 48 hours?  
 Yes  No  
 \*Standard Turnaround = 10

**Notes**

**Matrix Types:** S = Soil SL = Sludge DW = Drinking Water VWW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other

**Turnaround # of working days:**  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)

Lab TAT Approval: \_\_\_\_\_ \*Additional Charges May Apply

**Comments:**  
 PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MS/MSD)  
 90% Level III and 10% Level IV data validation required; Level IV Notated on C of C  
 NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)

**Cost Center:**  
 1. Relinquished By: [Signature] Date: 10-15-19 Time: 1555  
 2. Relinquished By: [Signature] Date: 10-15-19 Time: 1820  
 3. Relinquished By: [Signature] Date: 10-15-19 Time: 1920

**Global ID:** [Signature] Date: 10-15-19 Time: 1855

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 3

Submission #: 19-35353

Shipping Information: Fed Ex  UPS  Ontrac  Hand Delivery  Other  (Specify) \_\_\_\_\_

Shipping Container: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

Free Liquid: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.95 Container: PE Thermometer ID: 206 Date/Time: 10/15/19 18:20

Temperature: (A) 1.0 °C / (C) 0.4 °C Analyst Init: DM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		ABC	ABC	ABC	ABC	ABC	ABC	ABC	ABC	ABC
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8030										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
Box EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
Box / 16oz / 32oz AMBER										
Box / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_ Date/Time: 10/15 1939

Sample Numbering Completed By: *GS* Rev 21 05/23/2016

A = Actual / C = Corrected [S:\ATPDoc\Word\PerfectLAB\_SDCSI\FORMS\AMRE\Rev 20]



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 3

Submission #: 19-35353

SHIPPING INFORMATION: Fed Ex, UPS, Ontrac, Hand Delivery, BC Lab Field Service. SHIPPING CONTAINER: Ice Chest, None, Box, Other. FREE LIQUID: YES, NO, W/S.

Refrigerant: Ice, Blue Ice, None, Other. Comments:

Custody Seals: Ice Chest, Containers, None. Intact? Yes/No.

All samples received? Yes/No. All samples containers intact? Yes/No. Description(s) match COC? Yes/No.

COC Received: YES/NO. Emissivity: 0.95. Container: PE. Thermometer ID: 208. Date/Time: 10/15/19 18:20. Temperature: 1.0 C / 0.4 C. Analyst Init: Dmm

Table with columns: SAMPLE CONTAINERS, SAMPLE NUMBERS (1-10). Rows include: QT PE UNPRES, 4oz / 8oz / 16oz PE UNPRES, 2oz Cr+, QT INORGANIC CHEMICAL METALS, INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz, PT CYANIDE, PT NITROGEN FORMS, PT TOTAL SULFIDE, 2oz. NITRATE / NITRITE, PT TOTAL ORGANIC CARBON, PT CHEMICAL OXYGEN DEMAND, PIA PHENOLICS, 40ml VOA VIAL TRAVEL BLANK, 40ml VOA VIAL, QT EPA 1664, PT ODOR, RADIOLOGICAL, BACTERIOLOGICAL, 40 ml VOA VIAL- 504, QT EPA 508/608/8080, QT EPA 515.1/8150, QT EPA 525, QT EPA 525 TRAVEL BLANK, 40ml EPA 547, 40ml EPA 531.1, Box EPA 548, QT EPA 549, QT EPA 8015M, QT EPA 8270, 8oz / 16oz / 32oz AMBER, 8oz / 16oz / 32oz JAR, SOIL SLEEVE, PCB VIAL, PLASTIC BAG, TRIDLAR BAG, FERROUS IRON, ENCORE, SMART KIT, SUMMA CANISTER.

Comments: Sample Numbering Completed By: Date/Time: 10/15 1939. Rev 21 05/23/2016. US:\WPDec\Word\PerfectLAB\_DOC\FORMS\SAMRECrev 201



BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 of 3

Submission #: 19-35353

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify):

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify):

FREE LIQUID YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments:

Custody Seals: Containers  None  Comments:

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10/15/19 18:20

Temperature: (A) 1.2 °C / (C) 0.6 °C Analyst Init: DM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	E	E	E	E	E	E	E	E	E	E
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>	D	D	D	D	D	D	D	D	D	D
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz	F	F	F	F	F	F	F	F	F	F
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/08/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8170										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_ Date/Time: 10/15/19 19:39

Sample Numbering Completed By: GSP

A = Actual / C = Corrected



Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1935353-01</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> TB-2-101519 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 07:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-2-101519 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1935353-02</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-14-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 07:45 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: Location ID (FieldPoint): MW-14-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935353-03</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-14-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 08:20 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: Location ID (FieldPoint): MW-14-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935353-04</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-14-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 08:50 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: Location ID (FieldPoint): MW-14-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935353-05</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-14-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 09:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: Location ID (FieldPoint): MW-14-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935353-06</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-25-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 11:45 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: Location ID (FieldPoint): MW-25-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935353-07</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-25-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 12:45 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: Location ID (FieldPoint): MW-25-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935353-08</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-25-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 13:20 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: Location ID (FieldPoint): MW-25-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935353-09</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> DUP-3-4Q19 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 13:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: Location ID (FieldPoint): DUP-3-4Q19 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935353-10</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-25-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 14:40 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: Location ID (FieldPoint): MW-25-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935353-11</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-25-1 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 15:15 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: Location ID (FieldPoint): MW-25-1 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935353-12</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> EB-2-101519 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/15/2019 18:20 <b>Sampling Date:</b> 10/15/2019 15:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: Location ID (FieldPoint): EB-2-101519 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-01	<b>Client Sample Name:</b> NASA/JPL, TB-2-101519, 10/15/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2019 8:56
Project: JPL- GW Monitoring Wells
Project Number: 4Q19
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1935353-01) and Client Sample Name (NASA/JPL, TB-2-101519, 10/15/2019 7:00:00AM, Blaine Tech)

Main data table with 9 columns: Constituent, Result, Units, PQL, MDL, Method, MB Bias, Lab Qualls, Run #. Lists various chemical compounds and their analysis results.

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-01	<b>Client Sample Name:</b> NASA/JPL, TB-2-101519, 10/15/2019 7:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 13:42	MGC	MS-V5	1	B059949

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-01	<b>Client Sample Name:</b> NASA/JPL, TB-2-101519, 10/15/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 13:42	MGC	MS-V5	1	B059949

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-02	<b>Client Sample Name:</b> NASA/JPL, MW-14-5, 10/15/2019 7:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935353-02 Client Sample Name: NASA/JPL, MW-14-5, 10/15/2019 7:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935353-02      **Client Sample Name:** NASA/JPL, MW-14-5, 10/15/2019 7:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 11:17	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-02	<b>Client Sample Name:</b> NASA/JPL, MW-14-5, 10/15/2019 7:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 11:17	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935353-02	<b>Client Sample Name:</b> NASA/JPL, MW-14-5, 10/15/2019 7:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/03/19 10:00	11/03/19 12:15	SAV	IC6	1	B061044

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935353-02	<b>Client Sample Name:</b> NASA/JPL, MW-14-5, 10/15/2019 7:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00011	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/17/19 11:40	10/18/19 00:36	TMS	IC-4	1	B059963
2	EPA-200.8	10/17/19 07:50	10/17/19 12:33	AS1	PE-EL4	1	B059756

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935353-03 Client Sample Name: NASA/JPL, MW-14-4, 10/15/2019 8:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.18</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935353-03      **Client Sample Name:** NASA/JPL, MW-14-4, 10/15/2019 8:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935353-03      **Client Sample Name:** NASA/JPL, MW-14-4, 10/15/2019 8:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 14:07	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-03	<b>Client Sample Name:</b> NASA/JPL, MW-14-4, 10/15/2019 8:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 14:07	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935353-03	<b>Client Sample Name:</b> NASA/JPL, MW-14-4, 10/15/2019 8:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	4.1	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/09/19 19:02	SAV	IC6	1	B061722

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935353-03	<b>Client Sample Name:</b> NASA/JPL, MW-14-4, 10/15/2019 8:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0021	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>1.9</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/17/19 11:40	10/18/19 01:15		TMS	IC-4	1	B059963
2	EPA-200.8	10/17/19 07:50	10/17/19 13:33		AS1	PE-EL4	1	B059756

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935353-04 Client Sample Name: NASA/JPL, MW-14-3, 10/15/2019 8:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.48</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
<b>1,1-Dichloroethane</b>	<b>0.30</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.15</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935353-04 Client Sample Name: NASA/JPL, MW-14-3, 10/15/2019 8:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.44</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND	<b>J</b>	<b>1</b>
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.89</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		<b>1</b>
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-04	<b>Client Sample Name:</b> NASA/JPL, MW-14-3, 10/15/2019 8:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	107	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 14:31	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-04	<b>Client Sample Name:</b> NASA/JPL, MW-14-3, 10/15/2019 8:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 14:31	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935353-04	<b>Client Sample Name:</b> NASA/JPL, MW-14-3, 10/15/2019 8:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	4.0	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/03/19 10:00	11/03/19 13:32	SAV	IC6	1	B061044

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935353-04	<b>Client Sample Name:</b> NASA/JPL, MW-14-3, 10/15/2019 8:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000084	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/17/19 11:40	10/18/19 01:24		TMS	IC-4	1	B059963
2	EPA-200.8	10/17/19 07:50	10/17/19 13:35		AS1	PE-EL4	1	B059756

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-05	<b>Client Sample Name:</b> NASA/JPL, MW-14-2, 10/15/2019 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.58</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
<b>1,1-Dichloroethane</b>	<b>0.15</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.15</b>	<b>EPA-524.2</b>	ND	J	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935353-05		Client Sample Name: NASA/JPL, MW-14-2, 10/15/2019 9:30:00AM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.29</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>1.5</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-05	<b>Client Sample Name:</b> NASA/JPL, MW-14-2, 10/15/2019 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 14:55	MGC	MS-V5	1	B059949

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-05	<b>Client Sample Name:</b> NASA/JPL, MW-14-2, 10/15/2019 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 14:55	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935353-05	<b>Client Sample Name:</b> NASA/JPL, MW-14-2, 10/15/2019 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.5	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/03/19 10:00	11/03/19 14:18	SAV	IC6	1	B061044

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935353-05	<b>Client Sample Name:</b> NASA/JPL, MW-14-2, 10/15/2019 9:30:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00042	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/17/19 11:40	10/18/19 01:34		TMS	IC-4	1	B059963
2	EPA-200.8	10/17/19 07:50	10/17/19 13:38		AS1	PE-EL4	1	B059756

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-06	<b>Client Sample Name:</b> NASA/JPL, MW-25-5, 10/15/2019 11:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935353-06 Client Sample Name: NASA/JPL, MW-25-5, 10/15/2019 11:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
<b>Carbon disulfide</b>	<b>0.69</b>	<b>ug/L</b>	<b>1.0</b>	<b>0.48</b>	<b>EPA-524.2</b>	ND	<b>J</b>	<b>1</b>
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-06	<b>Client Sample Name:</b> NASA/JPL, MW-25-5, 10/15/2019 11:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 15:19	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-06	<b>Client Sample Name:</b> NASA/JPL, MW-25-5, 10/15/2019 11:45:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 15:19	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935353-06	<b>Client Sample Name:</b> NASA/JPL, MW-25-5, 10/15/2019 11:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/03/19 10:00	11/03/19 14:34	SAV	IC6	1	B061044

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935353-06	<b>Client Sample Name:</b> NASA/JPL, MW-25-5, 10/15/2019 11:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000049	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/17/19 11:40	10/18/19 01:43		TMS	IC-4	1	B059963
2	EPA-200.8	10/17/19 07:50	10/17/19 13:40		AS1	PE-EL4	1	B059756

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-07	<b>Client Sample Name:</b> NASA/JPL, MW-25-4, 10/15/2019 12:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-07	<b>Client Sample Name:</b> NASA/JPL, MW-25-4, 10/15/2019 12:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-07	<b>Client Sample Name:</b> NASA/JPL, MW-25-4, 10/15/2019 12:45:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 15:43	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-07	<b>Client Sample Name:</b> NASA/JPL, MW-25-4, 10/15/2019 12:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 15:43	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935353-07	<b>Client Sample Name:</b> NASA/JPL, MW-25-4, 10/15/2019 12:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	7.8	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/03/19 10:00	11/03/19 14:49	SAV	IC6	1	B061044

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935353-07	<b>Client Sample Name:</b> NASA/JPL, MW-25-4, 10/15/2019 12:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00044	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	0.92	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/17/19 11:40	10/18/19 02:12	TMS	IC-4	1	B059963
2	EPA-200.8	10/17/19 07:50	10/17/19 13:42	AS1	PE-EL4	1	B059756

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-08	<b>Client Sample Name:</b> NASA/JPL, MW-25-3, 10/15/2019 1:20:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.41</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	J	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-08	<b>Client Sample Name:</b> NASA/JPL, MW-25-3, 10/15/2019 1:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.50</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935353-08      **Client Sample Name:** NASA/JPL, MW-25-3, 10/15/2019 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 16:07	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-08	<b>Client Sample Name:</b> NASA/JPL, MW-25-3, 10/15/2019 1:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 16:07	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935353-08	<b>Client Sample Name:</b> NASA/JPL, MW-25-3, 10/15/2019 1:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	9.2	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/03/19 10:00	11/03/19 15:04	SAV	IC6	1	B061044

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935353-08	<b>Client Sample Name:</b> NASA/JPL, MW-25-3, 10/15/2019 1:20:00PM, Blaine Tech							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0025	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	1.9	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/17/19 11:40	10/18/19 02:22	TMS	IC-4	1	B059963
2	EPA-200.8	10/17/19 07:50	10/17/19 13:45	AS1	PE-EL4	1	B059756

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-09	<b>Client Sample Name:</b> NASA/JPL, DUP-3-4Q19, 10/15/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.75</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-09	<b>Client Sample Name:</b> NASA/JPL, DUP-3-4Q19, 10/15/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>1.5</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-09	<b>Client Sample Name:</b> NASA/JPL, DUP-3-4Q19, 10/15/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 16:32	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-09	<b>Client Sample Name:</b> NASA/JPL, DUP-3-4Q19, 10/15/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 16:32	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935353-09	<b>Client Sample Name:</b> NASA/JPL, DUP-3-4Q19, 10/15/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	9.3	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/03/19 10:00	11/03/19 15:20	SAV	IC6	1	B061044

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935353-09	<b>Client Sample Name:</b> NASA/JPL, DUP-3-4Q19, 10/15/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0025	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	3.9	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/17/19 11:40	10/18/19 02:31		TMS	IC-4	1	B059963
2	EPA-200.8	10/17/19 07:50	10/17/19 13:47		AS1	PE-EL4	1	B059756

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935353-10 Client Sample Name: NASA/JPL, MW-25-2, 10/15/2019 2:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935353-10      **Client Sample Name:** NASA/JPL, MW-25-2, 10/15/2019 2:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935353-10      **Client Sample Name:** NASA/JPL, MW-25-2, 10/15/2019 2:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	118	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 16:56	MGC	MS-V5	1	B059949

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Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-10	<b>Client Sample Name:</b> NASA/JPL, MW-25-2, 10/15/2019 2:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 16:56	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935353-10	<b>Client Sample Name:</b> NASA/JPL, MW-25-2, 10/15/2019 2:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	13	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/03/19 10:00	11/03/19 15:35	SAV	IC6	1	B061044

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935353-10	<b>Client Sample Name:</b> NASA/JPL, MW-25-2, 10/15/2019 2:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0010	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>1.2</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/17/19 11:40	10/18/19 02:41	TMS	IC-4	1	B059963
2	EPA-200.8	10/17/19 07:50	10/17/19 13:49	AS1	PE-EL4	1	B059756

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935353-11 Client Sample Name: NASA/JPL, MW-25-1, 10/15/2019 3:15:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.49</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935353-11 Client Sample Name: NASA/JPL, MW-25-1, 10/15/2019 3:15:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Methyl t-butyl ether</b>	<b>0.41</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>1.5</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-11	<b>Client Sample Name:</b> NASA/JPL, MW-25-1, 10/15/2019 3:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 17:20	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-11	<b>Client Sample Name:</b> NASA/JPL, MW-25-1, 10/15/2019 3:15:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 17:20	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935353-11	<b>Client Sample Name:</b> NASA/JPL, MW-25-1, 10/15/2019 3:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	7.1	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/03/19 10:00	11/03/19 15:50	SAV	IC6	1	B061044

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935353-11	<b>Client Sample Name:</b> NASA/JPL, MW-25-1, 10/15/2019 3:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00030	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>1.3</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/17/19 18:00	10/18/19 03:00		TMS	IC-4	1	B059964
2	EPA-200.8	10/17/19 07:50	10/17/19 13:52		AS1	PE-EL4	1	B059756

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-12	<b>Client Sample Name:</b> NASA/JPL, EB-2-101519, 10/15/2019 3:30:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-12	<b>Client Sample Name:</b> NASA/JPL, EB-2-101519, 10/15/2019 3:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935353-12	<b>Client Sample Name:</b> NASA/JPL, EB-2-101519, 10/15/2019 3:30:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	117	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 17:44	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935353-12	<b>Client Sample Name:</b> NASA/JPL, EB-2-101519, 10/15/2019 3:30:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/18/19 07:00	10/18/19 17:44	MGC	MS-V5	1	B059949

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935353-12	<b>Client Sample Name:</b> NASA/JPL, EB-2-101519, 10/15/2019 3:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/03/19 10:00	11/03/19 16:06	SAV	IC6	1	B061044

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935353-12	<b>Client Sample Name:</b> NASA/JPL, EB-2-101519, 10/15/2019 3:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/17/19 18:00	10/18/19 02:51		TMS	IC-4	1	B059964
2	EPA-200.8	10/17/19 07:50	10/17/19 14:30		AS1	PE-EL4	1	B059757

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Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059949</b>						
Benzene	B059949-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B059949-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B059949-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B059949-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B059949-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B059949-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B059949-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B059949-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B059949-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B059949-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B059949-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B059949-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B059949-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B059949-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B059949-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B059949-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B059949-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B059949-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B059949-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B059949-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B059949-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B059949-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B059949-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B059949-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B059949-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B059949-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B059949-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B059949-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B059949-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B059949-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B059949-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B059949-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B059949-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B059949-BLK1	ND	ug/L	0.50	0.14	

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**Reported:** 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059949</b>						
trans-1,3-Dichloropropene	B059949-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B059949-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B059949-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B059949-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B059949-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B059949-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B059949-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B059949-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B059949-BLK1	ND	ug/L	0.50	0.12	
Styrene	B059949-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B059949-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B059949-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B059949-BLK1	ND	ug/L	0.50	0.23	
Toluene	B059949-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B059949-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B059949-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B059949-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B059949-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B059949-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B059949-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B059949-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B059949-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B059949-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B059949-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B059949-BLK1	ND	ug/L	0.50	0.18	
Acetone	B059949-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B059949-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B059949-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B059949-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B059949-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B059949-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B059949-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B059949-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B059949-BLK1	ND	ug/L	4.0	1.3	

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**Reported:** 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059949</b>						
Ethyl t-butyl ether	B059949-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B059949-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B059949-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B059949-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B059949-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B059949-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B059949-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B059949-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B059949-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B059949-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B059949-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B059949-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B059949-BLK1	ND	ug/L	0.50	0.13	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>B059949-BLK1</b>	<b>109</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>B059949-BLK1</b>	<b>103</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>B059949-BLK1</b>	<b>102</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

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**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B059949</b>										
Benzene	B059949-BS1	LCS	24.890	25.000	ug/L	99.6		70 - 130		
Bromodichloromethane	B059949-BS1	LCS	27.610	25.000	ug/L	110		70 - 130		
Chlorobenzene	B059949-BS1	LCS	23.840	25.000	ug/L	95.4		70 - 130		
Chloroethane	B059949-BS1	LCS	28.090	25.000	ug/L	112		70 - 130		
1,4-Dichlorobenzene	B059949-BS1	LCS	23.170	25.000	ug/L	92.7		70 - 130		
1,1-Dichloroethane	B059949-BS1	LCS	27.520	25.000	ug/L	110		70 - 130		
1,1-Dichloroethene	B059949-BS1	LCS	27.280	25.000	ug/L	109		70 - 130		
Toluene	B059949-BS1	LCS	22.270	25.000	ug/L	89.1		70 - 130		
Trichloroethene	B059949-BS1	LCS	25.030	25.000	ug/L	100		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B059949-BS1	LCS	11.100	10.000	ug/L	111		75 - 125		
Toluene-d8 (Surrogate)	B059949-BS1	LCS	9.8000	10.000	ug/L	98.0		80 - 120		
4-Bromofluorobenzene (Surrogate)	B059949-BS1	LCS	10.170	10.000	ug/L	102		80 - 120		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2019 8:56
Project: JPL- GW Monitoring Wells
Project Number: 4Q19
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Source Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Control Limits Percent Recovery, Lab Quals. Includes QC Batch ID: B059949 and Used client sample: Y - Description: MW-14-5, 10/15/2019 07:45.

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2) TICs

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059949</b>						
Chloroacetonitrile	B059949-BLK1	0	ug/L			
1-Chlorobutane	B059949-BLK1	0	ug/L			
1,1-Dichloropropanone	B059949-BLK1	0	ug/L			
Methyl acrylate	B059949-BLK1	0	ug/L			
Nitrobenzene	B059949-BLK1	0	ug/L			
2-Nitropropane	B059949-BLK1	0	ug/L			

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B061044</b>						
Perchlorate	B061044-BLK1	ND	ug/L	4.0	0.76	
<b>QC Batch ID: B061722</b>						
Perchlorate	B061722-BLK1	ND	ug/L	4.0	0.76	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B061044</b>										
Perchlorate	B061044-BS1	LCS	11.312	10.000	ug/L	113		85	115	
<b>QC Batch ID: B061722</b>										
Perchlorate	B061722-BS1	LCS	9.7155	10.000	ug/L	97.2		85	115	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B061044</b>		Used client sample: Y - Description: MW-14-5, 10/15/2019 07:45								
Perchlorate	DUP	1935353-02	ND	ND		ug/L				15
	MS	1935353-02	ND	10.552	10.101	ug/L		104		80 - 120
	MSD	1935353-02	ND	10.419	10.101	ug/L	1.3	103	15	80 - 120
<b>QC Batch ID: B061722</b>		Used client sample: N								
Perchlorate	DUP	935983-02RE'	ND	ND		ug/L				15
	MS	935983-02RE'	ND	8.6021	10.101	ug/L		85.2		80 - 120
	MSD	935983-02RE'	ND	8.6687	10.101	ug/L	0.8	85.8	15	80 - 120

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059756</b>						
Total Recoverable Chromium	B059756-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B059757</b>						
Total Recoverable Chromium	B059757-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B059963</b>						
Hexavalent Chromium	B059963-BLK1	ND	mg/L	0.00020	0.000032	
<b>QC Batch ID: B059964</b>						
Hexavalent Chromium	B059964-BLK1	ND	mg/L	0.00020	0.000032	

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Metals Analysis

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B059756</b>										
Total Recoverable Chromium	B059756-BS1	LCS	40.779	40.000	ug/L	102		85 - 115		
<b>QC Batch ID: B059757</b>										
Total Recoverable Chromium	B059757-BS1	LCS	42.142	40.000	ug/L	105		85 - 115		
<b>QC Batch ID: B059963</b>										
Hexavalent Chromium	B059963-BS1	LCS	0.018400	0.020000	mg/L	92.0		90 - 110		
<b>QC Batch ID: B059964</b>										
Hexavalent Chromium	B059964-BS1	LCS	0.018400	0.020000	mg/L	92.0		90 - 110		

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Powell, OH 43065

Reported: 11/12/2019 8:56  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Metals Analysis

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B059756</b>		Used client sample: Y - Description: MW-14-5, 10/15/2019 07:45								
Total Recoverable Chromium	DUP	1935353-02	ND	ND		ug/L			20	
	MS	1935353-02	ND	40.158	40.000	ug/L		100		70 - 130
	MSD	1935353-02	ND	42.173	40.000	ug/L	4.9	105	20	70 - 130
<b>QC Batch ID: B059757</b>		Used client sample: N								
Total Recoverable Chromium	DUP	1935377-02	ND	ND		ug/L			20	
	MS	1935377-02	ND	38.645	40.000	ug/L		96.6		70 - 130
	MSD	1935377-02	ND	39.272	40.000	ug/L	1.6	98.2	20	70 - 130
<b>QC Batch ID: B059963</b>		Used client sample: Y - Description: MW-14-5, 10/15/2019 07:45								
Hexavalent Chromium	DUP	1935353-02	0.00011000	0.000097000		mg/L	12.6		10	J,A02
	MS	1935353-02	0.00011000	0.018562	0.020202	mg/L		91.3		90 - 110
	MSD	1935353-02	0.00011000	0.018432	0.020202	mg/L	0.7	90.7	10	90 - 110
<b>QC Batch ID: B059964</b>		Used client sample: Y - Description: MW-25-1, 10/15/2019 15:15								
Hexavalent Chromium	DUP	1935353-11	0.00029600	0.00029300		mg/L	1.0		10	
	MS	1935353-11	0.00029600	0.018690	0.020202	mg/L		91.0		90 - 110
	MSD	1935353-11	0.00029600	0.018797	0.020202	mg/L	0.6	91.6	10	90 - 110

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:56  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- V11 The Continuing Calibration Verification (CCV) recovery was not within established control limits.



Date of Report: 11/07/2019

David Conner

Tidewater Inc.

3761 Attucks Drive

Powell, OH 43065

Client Project: 4Q19

BCL Project: JPL- GW Monitoring Wells

BCL Work Order: 1935526

Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/16/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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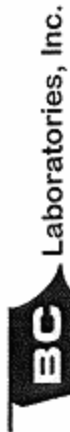
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Chain of Custody Form



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**Required Fields**

Report To: Client: **Tidewater, Inc.**  
 Client: **David Conner**  
 Street Address: **3761 Allucks Drive**  
 City: **Powell** State: **OH** Zip: **43065**  
 Phone: **626 | 298 - 5715** Fax: **614 | 792 - 2897**  
 Email Address: **david.conner@tiden2o.net**  
 Submission #: **19-35526**

Project Description: **JPL-GW Monitoring**  
 Project Code: **4Q19**  
 Sampler (s): **Blaine Tech**

**Billing**  
 Client: **Tidewater**  
 Attn: **David Conner**  
 Address: **3761 Allucks Drive**  
 City: **Powell** State: **OH** Zip: **43065**  
 Are there any tests with holding times? less than or equal to 48 hours?  
 Yes  No  
 \*Standard Turnaround = 10

**Analysis Requested**

Sample #	Sample Description	Date	Time	Matrix*
-1	BB-3-101619	10/16/19	0700	W
-2	MW-24-5		0845	W
-3	MW-24-4		0950	W
-4	MW-24-3		1030	W
-5	MW-24-2		1100	W
-6	MW-24-1		1200	W
-7	MW-22-5		1345	W
-8	MW-22-4		1430	W
-9	MW-22-3		1500	W
-10	DUF-4-4Q19		1510	W
-11	MW-22-2		1615	W

**Analysis Requested**

Analysis	Requested
VOCs EPA 524.2	X
TRM: Cr	X
Perchlorate	X
Hexavalent Cr 2185 (ng/L)	X
Cl, NO3, NO2, SO4	X
Orthophosphate 365.1	X

**Notes**  
 SUBSTITUTION  
 SUB OUT  
 MS/MSD Level 4  
 SHORT HOLDING TIME  
 1200-1300  
 13-8 (NO3) (OP) SS  
 100 CIG BODU MBPAS COT

**Matrix Types:** S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other

**Turnaround # of working days:**  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)

Lab TAT Approval: \_\_\_\_\_ \*Additional Charges May Apply

**Comments:**  
 PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MS/MSD)  
 90% Level III and 10% Level IV data validation required; Level IV Notated on C of C  
 NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)

**Cost Center:**  
 1. Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 2. Relinquished By: \_\_\_\_\_ Date: 10/16/19 Time: 1730  
 3. Relinquished By: \_\_\_\_\_ Date: 10/16/19 Time: 2040

**Global ID:**  
 1. Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 2. Received By: \_\_\_\_\_ Date: 10/16/19 Time: 1730  
 3. Received By: \_\_\_\_\_ Date: 10/16/19 Time: 2040

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327-4911 Fax: (661) 327-1918 www.bclabs.com

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### Chain of Custody Form

Page 2 of 2

**\* Required Fields**

<b>Report To:</b> Client: <u>Tidewater, Inc.</u> Attn: <u>David Conner</u> Street Address: <u>3761 Allucks Drive</u> City: <u>Powell</u> State: <u>OH</u> Zip: <u>43065</u> Phone: <u>626 288</u> Fax: <u>614 792-2897</u> Email Address: <u>david.conner@tideh2o.net</u> Submission #: <u>19-35526</u>			<b>Project Description:</b> <u>JPL-GW Monitoring</u> Project Code: <u>4019</u> Sampler(s): <u>Blaine Tech</u>			<b>Billing:</b> Client: <u>Tidewater</u> Attn: <u>David Conner</u> Address: <u>3761 Allucks Drive</u> City: <u>Powell</u> State: <u>OH</u> Zip: <u>43065</u> Are there any tests with holding times? less than or equal to 48 hours? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No *Standard Turnaround = 10											
<b>Analysis Requested</b> VOCs EPA 524.2 <input type="checkbox"/> TRM: Cr <input type="checkbox"/> Perchlorate <input type="checkbox"/> Hexavalent Cr 6 - 218.6 (mg/L) <input type="checkbox"/> Cl, NO3, NO2, SO4 <input type="checkbox"/> Orthophosphate 365.1 <input type="checkbox"/>						<b>Matrix Types:</b> S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other <input type="checkbox"/> 24 Hr Rush <input type="checkbox"/> 48 Hr Rush <input type="checkbox"/> 3-5 Day Rush <input checked="" type="checkbox"/> Normal (10 - Days)											
Turnaround # of working days:			Lab TAT Approval:			Matrix Types:			Turnaround # of working days:			Lab TAT Approval:					
<b>Comments:</b> PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MS/MSD) 90% Level III and 10% Level IV data validation required; Level IV Notated on C of C NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)						<b>Cost Center:</b> 1. Requisitioned By: _____ Date: _____ Time: _____ 2. Requisitioned By: _____ Date: _____ Time: _____ 3. Requisitioned By: _____ Date: _____ Time: _____						<b>Global ID:</b> 1. Requisitioned By: _____ Date: _____ Time: _____ 2. Requisitioned By: _____ Date: _____ Time: _____ 3. Requisitioned By: _____ Date: _____ Time: _____					
MBU site <input type="checkbox"/> CVX RCRA <input type="checkbox"/> Geotracker 5 File (CA Default) <input type="checkbox"/> Geotracker 2 File <input type="checkbox"/> Other (Specify) _____																	

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# Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC LABORATORIES INC.		COOLER RECEIPT FORM		Page 1 Of 2	
Submission #: 1935526					
SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____			SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments:					
Custody Seals: Ice Chest <input checked="" type="checkbox"/> Containers <input checked="" type="checkbox"/> None <input type="checkbox"/> Comments:					
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: 0.95 Container: PE Thermometer ID: 208		Date/Time: 10/16/2010	
		Temperature: (A) 3.0 °C / (C) 2.4 °C		Analyst Init: SJK	

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES		E	E	E	JJ	E	E	E		
4oz / 8oz / 16oz PE UNPRES						F				
2oz Cr <sup>4</sup>		D	D	D	GM	O	D	D		
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		F	F	F	KL	G	F	F		
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		ABC	ABC	ABC	A>F	ABC	ABC	ABC	ABC	ABC
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 504/604/804										
QT EPA 515/1815										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLREVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: GSD Date/Time: 10/16/2010  
 A = Actual / C = Corrected

Rev 21 05/23/2016  
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BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 1935526

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10/16/2016 Analyst Init: [Signature]

Temperature: (A) 21 °C / (C) 1.5 °C

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	9	10	11	12	13	6	7	8	9	10
QT PE UNPRES	E	E	E	E	E					
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>4</sup>	D	D	D	D	D					
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz	F	F	F	F	F					
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL			ABC	ABC	ABC					
QT EPA 1661										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/509/5080										
QT EPA 515.1/5150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 5015M										
QT EPA 5370										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TRDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_ Date/Time: 10/16/2016 Rev 21 05/23/2016

Sample Numbering Completed By: [Signature] Date/Time: 10/16/2016

A = Actual / C = Corrected

(S:\WPDec\Word\PerfectLAB\3003\FORMS\25AMRECIV 20)



Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935526-01</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> TB-3-101619 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 07:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-3-101619 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935526-02</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-24-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 08:45 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-24-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935526-03</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-24-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 09:50 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-24-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1935526-04</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-24-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 10:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-24-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935526-05</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-24-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 11:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-24-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935526-06</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-24-1 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 12:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-24-1 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1935526-07</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-22-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 13:45 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-22-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935526-08</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-22-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 14:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-22-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935526-09</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-22-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 15:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-22-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935526-10</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> DUP-4-4Q19 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 15:10 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-4-4Q19 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935526-11</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-22-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 16:15 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-22-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935526-12</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> EB-3-101619 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/16/2019 20:40 <b>Sampling Date:</b> 10/16/2019 15:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-3-101619 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935526-13</b>	<b>COC Number:</b>	---	<b>Receive Date:</b>	10/16/2019 20:40
	<b>Project Number:</b>	NASA/JPL	<b>Sampling Date:</b>	10/16/2019 16:50
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	MW-22-1	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Blaine Tech of BTST	<b>Sample Type:</b>	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-22-1	
			Matrix: WG	
			Sample QC Type (SACode): CS	
		Cooler ID:		

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-01	<b>Client Sample Name:</b> NASA/JPL, TB-3-101619, 10/16/2019 7:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-01	<b>Client Sample Name:</b> NASA/JPL, TB-3-101619, 10/16/2019 7:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-01	<b>Client Sample Name:</b> NASA/JPL, TB-3-101619, 10/16/2019 7:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 11:47	MGC	MS-V5	1	B060061

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-01	<b>Client Sample Name:</b> NASA/JPL, TB-3-101619, 10/16/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 11:47	MGC	MS-V5	1	B060061

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935526-02 Client Sample Name: NASA/JPL, MW-24-5, 10/16/2019 8:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935526-02      **Client Sample Name:** NASA/JPL, MW-24-5, 10/16/2019 8:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935526-02      **Client Sample Name:** NASA/JPL, MW-24-5, 10/16/2019 8:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 12:11	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-02	<b>Client Sample Name:</b> NASA/JPL, MW-24-5, 10/16/2019 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 12:11	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-02	<b>Client Sample Name:</b> NASA/JPL, MW-24-5, 10/16/2019 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/19 21:00	11/06/19 00:27	SAV	IC6	1	B061389

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-02	<b>Client Sample Name:</b> NASA/JPL, MW-24-5, 10/16/2019 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0025	mg/L	0.00020	0.000032	EPA-218.6	0.000045		1
<b>Total Recoverable Chromium</b>	<b>3.1</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>		<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 00:50		MRC	IC-4	1	B060136
2	EPA-200.8	10/18/19 12:35	10/18/19 18:25		AS1	PE-EL2	1	B059957

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935526-03 Client Sample Name: NASA/JPL, MW-24-4, 10/16/2019 9:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935526-03		Client Sample Name: NASA/JPL, MW-24-4, 10/16/2019 9:50:00AM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
<b>Styrene</b>	<b>0.18</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.12</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
<b>Carbon disulfide</b>	<b>0.59</b>	<b>ug/L</b>	<b>1.0</b>	<b>0.48</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935526-03      **Client Sample Name:** NASA/JPL, MW-24-4, 10/16/2019 9:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 12:35	MGC	MS-V5	1	B060061

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-03	<b>Client Sample Name:</b> NASA/JPL, MW-24-4, 10/16/2019 9:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 12:35	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-03	<b>Client Sample Name:</b> NASA/JPL, MW-24-4, 10/16/2019 9:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.3	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/19 21:00	11/06/19 00:43	SAV	IC6	1	B061389

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-03	<b>Client Sample Name:</b> NASA/JPL, MW-24-4, 10/16/2019 9:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000083	mg/L	0.00020	0.000032	EPA-218.6	0.000045	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 00:59		MRC	IC-4	1	B060136
2	EPA-200.8	10/18/19 12:35	10/18/19 18:26		AS1	PE-EL2	1	B059957

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-04	<b>Client Sample Name:</b> NASA/JPL, MW-24-3, 10/16/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
<b>1,1-Dichloroethane</b>	<b>0.18</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.15</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-04	<b>Client Sample Name:</b> NASA/JPL, MW-24-3, 10/16/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-04	<b>Client Sample Name:</b> NASA/JPL, MW-24-3, 10/16/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	107	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 13:00	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-04	<b>Client Sample Name:</b> NASA/JPL, MW-24-3, 10/16/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 13:00	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-04	<b>Client Sample Name:</b> NASA/JPL, MW-24-3, 10/16/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/19 21:00	11/06/19 01:29	SAV	IC6	1	B061389

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-04	<b>Client Sample Name:</b> NASA/JPL, MW-24-3, 10/16/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000037	mg/L	0.00020	0.000032	EPA-218.6	0.000045	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 01:09		MRC	IC-4	1	B060136
2	EPA-200.8	10/18/19 12:35	10/18/19 18:28		AS1	PE-EL2	1	B059957

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935526-05      **Client Sample Name:** NASA/JPL, MW-24-2, 10/16/2019 11:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
<b>Bromodichloromethane</b>	<b>0.20</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.20</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.45</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935526-05      **Client Sample Name:** NASA/JPL, MW-24-2, 10/16/2019 11:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935526-05      **Client Sample Name:** NASA/JPL, MW-24-2, 10/16/2019 11:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 09:21	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-05	<b>Client Sample Name:</b> NASA/JPL, MW-24-2, 10/16/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 09:21	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-05	<b>Client Sample Name:</b> NASA/JPL, MW-24-2, 10/16/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	5.6	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/19 21:00	11/05/19 23:26	SAV	IC6	1	B061389

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-05	<b>Client Sample Name:</b> NASA/JPL, MW-24-2, 10/16/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0021	mg/L	0.00020	0.000032	EPA-218.6	0.000045		1
Total Recoverable Chromium	2.1	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/18/19 23:52		MRC	IC-4	1	B060136
2	EPA-200.8	10/18/19 12:35	10/18/19 18:08		AS1	PE-EL2	1	B059957

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-06	<b>Client Sample Name:</b> NASA/JPL, MW-24-1, 10/16/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>1.4</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-06	<b>Client Sample Name:</b> NASA/JPL, MW-24-1, 10/16/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-06	<b>Client Sample Name:</b> NASA/JPL, MW-24-1, 10/16/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 13:24	MGC	MS-V5	1	B060061

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-06	<b>Client Sample Name:</b> NASA/JPL, MW-24-1, 10/16/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 13:24	MGC	MS-V5	1	B060061

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-06	<b>Client Sample Name:</b> NASA/JPL, MW-24-1, 10/16/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	76	mg/L	0.50	0.15	EPA-300.0	ND		1
Nitrate as N	1.5	mg/L	0.10	0.042	EPA-300.0	ND		1
Sulfate	49	mg/L	1.0	0.20	EPA-300.0	ND		1
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		2
Perchlorate	2.1	ug/L	4.0	0.76	EPA-314.0	ND	J	3
ortho-Phosphate as P	0.018	mg/L	0.050	0.017	EPA-365.1	ND	J	4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	10/17/19 17:00	10/17/19 19:57	CMM	IC8	1	B059978
2	EPA-353.2	10/17/19 08:59	10/17/19 09:19	MC1	KONE-1	1	B059932
3	EPA-314.0	11/05/19 21:00	11/06/19 01:44	SAV	IC6	1	B061389
4	EPA-365.1	10/17/19 11:44	10/17/19 11:53	MC1	SC-1	1	B059922

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-06	<b>Client Sample Name:</b> NASA/JPL, MW-24-1, 10/16/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00011	mg/L	0.00020	0.000032	EPA-218.6	0.000045	J	1
<b>Total Recoverable Chromium</b>	<b>3.6</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>		<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 01:19		MRC	IC-4	1	B060136
2	EPA-200.8	10/18/19 12:35	10/18/19 18:30		AS1	PE-EL2	1	B059957

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-07	<b>Client Sample Name:</b> NASA/JPL, MW-22-5, 10/16/2019 1:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935526-07 Client Sample Name: NASA/JPL, MW-22-5, 10/16/2019 1:45:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-07	<b>Client Sample Name:</b> NASA/JPL, MW-22-5, 10/16/2019 1:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 13:48	MGC	MS-V5	1	B060061

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-07	<b>Client Sample Name:</b> NASA/JPL, MW-22-5, 10/16/2019 1:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 13:48	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-07	<b>Client Sample Name:</b> NASA/JPL, MW-22-5, 10/16/2019 1:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/19 21:00	11/06/19 01:59	SAV	IC6	1	B061389

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-07	<b>Client Sample Name:</b> NASA/JPL, MW-22-5, 10/16/2019 1:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00011	mg/L	0.00020	0.000032	EPA-218.6	0.000045	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 01:28		MRC	IC-4	1	B060136
2	EPA-200.8	10/18/19 12:35	10/18/19 18:32		AS1	PE-EL2	1	B059957

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-08	<b>Client Sample Name:</b> NASA/JPL, MW-22-4, 10/16/2019 2:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-08	<b>Client Sample Name:</b> NASA/JPL, MW-22-4, 10/16/2019 2:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935526-08      **Client Sample Name:** NASA/JPL, MW-22-4, 10/16/2019 2:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 14:12	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-08	<b>Client Sample Name:</b> NASA/JPL, MW-22-4, 10/16/2019 2:30:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 14:12	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-08	<b>Client Sample Name:</b> NASA/JPL, MW-22-4, 10/16/2019 2:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	0.95	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/19 21:00	11/06/19 02:15	SAV	IC6	1	B061389

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-08	<b>Client Sample Name:</b> NASA/JPL, MW-22-4, 10/16/2019 2:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0025	mg/L	0.00020	0.000032	EPA-218.6	0.000045		1
Total Recoverable Chromium	2.3	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 01:38		MRC	IC-4	1	B060136
2	EPA-200.8	10/18/19 12:35	10/18/19 18:33		AS1	PE-EL2	1	B059957

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Reported: 11/07/2019 10:58
Project: JPL- GW Monitoring Wells
Project Number: 4Q19
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1935526-09) and Client Sample Name (NASA/JPL, MW-22-3, 10/16/2019 3:00:00PM, Blaine Tech)

Main data table with columns: Constituent, Result, Units, PQL, MDL, Method, MB Bias, Lab Qualls, Run #. Lists various organic compounds and their detection results.

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935526-09 Client Sample Name: NASA/JPL, MW-22-3, 10/16/2019 3:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-09	<b>Client Sample Name:</b> NASA/JPL, MW-22-3, 10/16/2019 3:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 14:36	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-09	<b>Client Sample Name:</b> NASA/JPL, MW-22-3, 10/16/2019 3:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 14:36	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-09	<b>Client Sample Name:</b> NASA/JPL, MW-22-3, 10/16/2019 3:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.8	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/19 21:00	11/06/19 02:30	SAV	IC6	1	B061389

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-09	<b>Client Sample Name:</b> NASA/JPL, MW-22-3, 10/16/2019 3:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00094	mg/L	0.00020	0.000032	EPA-218.6	0.000045		1
Total Recoverable Chromium	1.2	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 01:47		MRC	IC-4	1	B060136
2	EPA-200.8	10/18/19 12:35	10/18/19 18:35		AS1	PE-EL2	1	B059957

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-10	<b>Client Sample Name:</b> NASA/JPL, DUP-4-4Q19, 10/16/2019 3:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-10	<b>Client Sample Name:</b> NASA/JPL, DUP-4-4Q19, 10/16/2019 3:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-10	<b>Client Sample Name:</b> NASA/JPL, DUP-4-4Q19, 10/16/2019 3:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 15:01	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-10	<b>Client Sample Name:</b> NASA/JPL, DUP-4-4Q19, 10/16/2019 3:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 15:01	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-10	<b>Client Sample Name:</b> NASA/JPL, DUP-4-4Q19, 10/16/2019 3:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.9	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/19 21:00	11/06/19 02:46	SAV	IC6	1	B061389

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-10	<b>Client Sample Name:</b> NASA/JPL, DUP-4-4Q19, 10/16/2019 3:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00092	mg/L	0.00020	0.000032	EPA-218.6	0.000045		1
<b>Total Recoverable Chromium</b>	<b>0.78</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 01:57		MRC	IC-4	1	B060136
2	EPA-200.8	10/18/19 12:35	10/18/19 18:37		AS1	PE-EL2	1	B059957

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-11	<b>Client Sample Name:</b> NASA/JPL, MW-22-2, 10/16/2019 4:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935526-11      **Client Sample Name:** NASA/JPL, MW-22-2, 10/16/2019 4:15:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-11	<b>Client Sample Name:</b> NASA/JPL, MW-22-2, 10/16/2019 4:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 15:25	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-11	<b>Client Sample Name:</b> NASA/JPL, MW-22-2, 10/16/2019 4:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 15:25	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-11	<b>Client Sample Name:</b> NASA/JPL, MW-22-2, 10/16/2019 4:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.6	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/19 21:00	11/06/19 03:01	SAV	IC6	1	B061389

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-11	<b>Client Sample Name:</b> NASA/JPL, MW-22-2, 10/16/2019 4:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0016	mg/L	0.00020	0.000032	EPA-218.6	0.000045		1
Total Recoverable Chromium	1.6	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 02:07		MRC	IC-4	1	B060136
2	EPA-200.8	10/18/19 12:35	10/18/19 18:39		AS1	PE-EL2	1	B059957

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935526-12      **Client Sample Name:** NASA/JPL, EB-3-101619, 10/16/2019 3:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-12	<b>Client Sample Name:</b> NASA/JPL, EB-3-101619, 10/16/2019 3:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-12	<b>Client Sample Name:</b> NASA/JPL, EB-3-101619, 10/16/2019 3:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 15:49	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-12	<b>Client Sample Name:</b> NASA/JPL, EB-3-101619, 10/16/2019 3:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 15:49	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-12	<b>Client Sample Name:</b> NASA/JPL, EB-3-101619, 10/16/2019 3:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/19 21:00	11/06/19 03:16	SAV	IC6	1	B061389

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-12	<b>Client Sample Name:</b> NASA/JPL, EB-3-101619, 10/16/2019 3:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000048	mg/L	0.00020	0.000032	EPA-218.6	0.000050	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 03:52		MRC	IC-4	1	B060137
2	EPA-200.8	10/18/19 12:35	10/18/19 17:23		AS1	PE-EL2	1	B059958

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-13	<b>Client Sample Name:</b> NASA/JPL, MW-22-1, 10/16/2019 4:50:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.72</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-13	<b>Client Sample Name:</b> NASA/JPL, MW-22-1, 10/16/2019 4:50:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.48</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935526-13	<b>Client Sample Name:</b> NASA/JPL, MW-22-1, 10/16/2019 4:50:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 16:13	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935526-13	<b>Client Sample Name:</b> NASA/JPL, MW-22-1, 10/16/2019 4:50:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/21/19 07:00	10/21/19 16:13	MGC	MS-V5	1	B060061

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935526-13	<b>Client Sample Name:</b> NASA/JPL, MW-22-1, 10/16/2019 4:50:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	170	ug/L	40	7.6	EPA-314.0	ND	A07	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/19 21:00	11/06/19 11:16	SAV	IC6	10	B061389

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**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935526-13	<b>Client Sample Name:</b> NASA/JPL, MW-22-1, 10/16/2019 4:50:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00057	mg/L	0.00020	0.000032	EPA-218.6	0.000050		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 04:02		MRC	IC-4	1	B060137
2	EPA-200.8	10/18/19 12:35	10/18/19 17:51		AS1	PE-EL2	1	B059958

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**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060061</b>						
Benzene	B060061-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B060061-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B060061-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B060061-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B060061-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B060061-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B060061-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B060061-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B060061-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B060061-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B060061-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B060061-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B060061-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B060061-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B060061-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B060061-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B060061-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B060061-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B060061-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B060061-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B060061-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B060061-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B060061-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B060061-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B060061-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B060061-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B060061-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B060061-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B060061-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B060061-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B060061-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B060061-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B060061-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B060061-BLK1	ND	ug/L	0.50	0.14	

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**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060061</b>						
trans-1,3-Dichloropropene	B060061-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B060061-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B060061-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B060061-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B060061-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B060061-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B060061-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B060061-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B060061-BLK1	ND	ug/L	0.50	0.12	
Styrene	B060061-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B060061-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B060061-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B060061-BLK1	ND	ug/L	0.50	0.23	
Toluene	B060061-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B060061-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B060061-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B060061-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B060061-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B060061-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B060061-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B060061-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B060061-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B060061-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B060061-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B060061-BLK1	ND	ug/L	0.50	0.18	
Acetone	B060061-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B060061-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B060061-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B060061-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B060061-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B060061-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B060061-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B060061-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B060061-BLK1	ND	ug/L	4.0	1.3	

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**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060061</b>						
Ethyl t-butyl ether	B060061-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B060061-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B060061-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B060061-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B060061-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B060061-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B060061-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B060061-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B060061-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B060061-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B060061-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B060061-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B060061-BLK1	ND	ug/L	0.50	0.13	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>B060061-BLK1</b>	<b>101</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>B060061-BLK1</b>	<b>102</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>B060061-BLK1</b>	<b>106</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

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Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B060061</b>										
Benzene	B060061-BS1	LCS	24.210	25.000	ug/L	96.8		70 - 130		
Bromodichloromethane	B060061-BS1	LCS	26.400	25.000	ug/L	106		70 - 130		
Chlorobenzene	B060061-BS1	LCS	24.670	25.000	ug/L	98.7		70 - 130		
Chloroethane	B060061-BS1	LCS	27.830	25.000	ug/L	111		70 - 130		
1,4-Dichlorobenzene	B060061-BS1	LCS	22.980	25.000	ug/L	91.9		70 - 130		
1,1-Dichloroethane	B060061-BS1	LCS	26.840	25.000	ug/L	107		70 - 130		
1,1-Dichloroethene	B060061-BS1	LCS	26.400	25.000	ug/L	106		70 - 130		
Toluene	B060061-BS1	LCS	22.370	25.000	ug/L	89.5		70 - 130		
Trichloroethene	B060061-BS1	LCS	24.510	25.000	ug/L	98.0		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B060061-BS1	LCS	10.220	10.000	ug/L	102		75 - 125		
Toluene-d8 (Surrogate)	B060061-BS1	LCS	9.9300	10.000	ug/L	99.3		80 - 120		
4-Bromofluorobenzene (Surrogate)	B060061-BS1	LCS	10.870	10.000	ug/L	109		80 - 120		

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Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060061</b>		Used client sample: Y - Description: MW-24-2, 10/16/2019 11:00								
Benzene	MS	1935526-05	ND	24.450	25.000	ug/L		97.8		70 - 130
	MSD	1935526-05	ND	24.250	25.000	ug/L	0.8	97.0	20	70 - 130
Bromodichloromethane	MS	1935526-05	0.20000	26.620	25.000	ug/L		106		70 - 130
	MSD	1935526-05	0.20000	27.240	25.000	ug/L	2.3	108	20	70 - 130
Chlorobenzene	MS	1935526-05	ND	23.720	25.000	ug/L		94.9		70 - 130
	MSD	1935526-05	ND	23.320	25.000	ug/L	1.7	93.3	20	70 - 130
Chloroethane	MS	1935526-05	ND	28.360	25.000	ug/L		113		70 - 130
	MSD	1935526-05	ND	28.030	25.000	ug/L	1.2	112	20	70 - 130
1,4-Dichlorobenzene	MS	1935526-05	ND	22.600	25.000	ug/L		90.4		70 - 130
	MSD	1935526-05	ND	23.800	25.000	ug/L	5.2	95.2	20	70 - 130
1,1-Dichloroethane	MS	1935526-05	ND	27.770	25.000	ug/L		111		70 - 130
	MSD	1935526-05	ND	26.820	25.000	ug/L	3.5	107	20	70 - 130
1,1-Dichloroethene	MS	1935526-05	ND	26.300	25.000	ug/L		105		70 - 130
	MSD	1935526-05	ND	26.280	25.000	ug/L	0.1	105	20	70 - 130
Toluene	MS	1935526-05	ND	22.360	25.000	ug/L		89.4		70 - 130
	MSD	1935526-05	ND	22.860	25.000	ug/L	2.2	91.4	20	70 - 130
Trichloroethene	MS	1935526-05	ND	24.700	25.000	ug/L		98.8		70 - 130
	MSD	1935526-05	ND	25.040	25.000	ug/L	1.4	100	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1935526-05	ND	10.470	10.000	ug/L		105		75 - 125
	MSD	1935526-05	ND	10.440	10.000	ug/L	0.3	104		75 - 125
Toluene-d8 (Surrogate)	MS	1935526-05	ND	9.8000	10.000	ug/L		98.0		80 - 120
	MSD	1935526-05	ND	10.350	10.000	ug/L	5.5	104		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1935526-05	ND	10.380	10.000	ug/L		104		80 - 120
	MSD	1935526-05	ND	10.200	10.000	ug/L	1.7	102		80 - 120

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**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060061</b>						
Chloroacetonitrile	B060061-BLK1	0	ug/L			
1-Chlorobutane	B060061-BLK1	0	ug/L			
1,1-Dichloropropanone	B060061-BLK1	0	ug/L			
Methyl acrylate	B060061-BLK1	0	ug/L			
Nitrobenzene	B060061-BLK1	0	ug/L			
2-Nitropropane	B060061-BLK1	0	ug/L			

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059922</b>						
ortho-Phosphate as P	B059922-BLK1	ND	mg/L	0.050	0.017	
<b>QC Batch ID: B059932</b>						
Nitrite as N	B059932-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B059978</b>						
Chloride	B059978-BLK1	ND	mg/L	0.50	0.15	
Nitrate as N	B059978-BLK1	ND	mg/L	0.10	0.042	
Sulfate	B059978-BLK1	ND	mg/L	1.0	0.20	
<b>QC Batch ID: B061389</b>						
Perchlorate	B061389-BLK1	ND	ug/L	4.0	0.76	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B059922</b>										
ortho-Phosphate as P	B059922-BS1	LCS	0.50440	0.50000	mg/L	101		90 - 110		
<b>QC Batch ID: B059932</b>										
Nitrite as N	B059932-BS1	LCS	0.50936	0.50000	mg/L	102		90 - 110		
<b>QC Batch ID: B059978</b>										
Chloride	B059978-BS1	LCS	51.273	50.000	mg/L	103		90 - 110		
Nitrate as N	B059978-BS1	LCS	5.0010	5.0000	mg/L	100		90 - 110		
Sulfate	B059978-BS1	LCS	102.33	100.00	mg/L	102		90 - 110		
<b>QC Batch ID: B061389</b>										
Perchlorate	B061389-BS1	LCS	11.488	10.000	ug/L	115		85 - 115		

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B059922</b>		Used client sample: Y - Description: MW-24-1, 10/16/2019 12:00								
ortho-Phosphate as P	DUP	1935526-06	0.017600	0.017800		mg/L	1.1		10	J
	MS	1935526-06	0.017600	0.54200	0.52632	mg/L		99.6	90 - 110	
	MSD	1935526-06	0.017600	0.55695	0.52632	mg/L	2.7	102	10	90 - 110
<b>QC Batch ID: B059932</b>		Used client sample: Y - Description: MW-24-1, 10/16/2019 12:00								
Nitrite as N	DUP	1935526-06	ND	ND		mg/L			10	
	MS	1935526-06	ND	0.52378	0.52632	mg/L		99.5	90 - 110	
	MSD	1935526-06	ND	0.53984	0.52632	mg/L	3.0	103	10	90 - 110
<b>QC Batch ID: B059978</b>		Used client sample: N								
Chloride	DUP	1935519-01	127.70	128.64		mg/L	0.7		10	
	MS	1935519-01	127.70	174.98	50.505	mg/L		93.6		80 - 120
	MSD	1935519-01	127.70	175.51	50.505	mg/L	0.3	94.7	10	80 - 120
Nitrate as N	DUP	1935519-01	ND	ND		mg/L			10	
	MS	1935519-01	ND	5.0899	5.0505	mg/L		101		80 - 120
	MSD	1935519-01	ND	5.1283	5.0505	mg/L	0.8	102	10	80 - 120
Sulfate	DUP	1935519-01	1.8290	1.7440		mg/L	4.8		10	
	MS	1935519-01	1.8290	104.14	101.01	mg/L		101		80 - 120
	MSD	1935519-01	1.8290	103.97	101.01	mg/L	0.2	101	10	80 - 120
<b>QC Batch ID: B061389</b>		Used client sample: Y - Description: MW-24-2, 10/16/2019 11:00								
Perchlorate	DUP	1935526-05	5.6012	5.5296		ug/L	1.3		15	
	MS	1935526-05	5.6012	16.680	10.101	ug/L		110		80 - 120
	MSD	1935526-05	5.6012	16.056	10.101	ug/L	3.8	104	15	80 - 120

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B059957</b>						
Total Recoverable Chromium	B059957-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B059958</b>						
Total Recoverable Chromium	B059958-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B060136</b>						
Hexavalent Chromium	B060136-BLK1	0.000045000	mg/L	0.00020	0.000032	J
<b>QC Batch ID: B060137</b>						
Hexavalent Chromium	B060137-BLK1	0.000050000	mg/L	0.00020	0.000032	J

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Metals Analysis

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B059957</b>										
Total Recoverable Chromium	B059957-BS1	LCS	44.488	40.000	ug/L	111		85 - 115		
<b>QC Batch ID: B059958</b>										
Total Recoverable Chromium	B059958-BS1	LCS	41.900	40.000	ug/L	105		85 - 115		
<b>QC Batch ID: B060136</b>										
Hexavalent Chromium	B060136-BS1	LCS	0.021255	0.020000	mg/L	106		90 - 110		
<b>QC Batch ID: B060137</b>										
Hexavalent Chromium	B060137-BS1	LCS	0.021423	0.020000	mg/L	107		90 - 110		

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/07/2019 10:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Metals Analysis

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B059957</b>		Used client sample: Y - Description: MW-24-2, 10/16/2019 11:00								
Total Recoverable Chromium	DUP	1935526-05	2.0620	2.0450		ug/L	0.8		20	J
	MS	1935526-05	2.0620	38.762	40.000	ug/L		91.8	70 - 130	
	MSD	1935526-05	2.0620	37.984	40.000	ug/L	2.0	89.8	20 70 - 130	
<b>QC Batch ID: B059958</b>		Used client sample: Y - Description: EB-3-101619, 10/16/2019 15:30								
Total Recoverable Chromium	DUP	1935526-12	ND	ND		ug/L			20	
	MS	1935526-12	ND	44.139	40.000	ug/L		110	70 - 130	
	MSD	1935526-12	ND	42.635	40.000	ug/L	3.5	107	20 70 - 130	
<b>QC Batch ID: B060136</b>		Used client sample: Y - Description: MW-24-2, 10/16/2019 11:00								
Hexavalent Chromium	DUP	1935526-05	0.0021320	0.0021770		mg/L	2.1		10	
	MS	1935526-05	0.0021320	0.024205	0.020202	mg/L		109	90 - 110	
	MSD	1935526-05	0.0021320	0.024305	0.020202	mg/L	0.4	110	10 90 - 110	
<b>QC Batch ID: B060137</b>		Used client sample: N								
Hexavalent Chromium	DUP	1935721-01	0.000055000	0.000046000		mg/L	17.8		10	J,A02
	MS	1935721-01	0.000055000	0.021000	0.020202	mg/L		104	90 - 110	
	MSD	1935721-01	0.000055000	0.021185	0.020202	mg/L	0.9	105	10 90 - 110	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/07/2019 10:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.



Date of Report: 11/11/2019

David Conner

Tidewater Inc.

3761 Attucks Drive

Powell, OH 43065

Client Project: 4Q19

BCL Project: JPL- GW Monitoring Wells

BCL Work Order: 1935709

Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/17/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Laboratories, Inc.

Environmental Testing Laboratory Since 1949

Chain of Custody Form

Page 1 of 2

**Client:** Tidewater, Inc.  
**Client:** David Corner  
**Street Address:** 3761 Attucks Drive  
**City:** Powell **State:** OH **Zip:** 43065  
**Phone:** 626 1298 5715 **Fax:** 614 792 2897  
**Email Address:** david.corner@tidewater.net  
**Submission #:** 19-35709

**Project Description:** JPL-GW Monitoring  
**Project Code:** 4019  
**Sampler (s):** Blaine Tech

**Analysis Requested:**  
 Hexavalent Cr6 - 218.6 (mg/L)   
 Cl, NO3, NO2, SO4   
 Orthophosphate 365.1   
 Perchlorate   
 TRM: Cr   
 VOCs EPA 524.2

**Billing:**  
**Client:** Tidewater  
**Attn:** David Corner  
**Address:** 3761 Attucks Drive  
**City:** Powell **State:** OH **Zip:** 43065  
 Are there any tests with holding times? less than or equal to 48 hours?  
 Yes  No  
 \*Standard Turnaround = 10

Sample #	Sample Description	Date	Time	Matrix*	Notes
-1	TB-4-101719	10/17/19	0700	W	
-2	MW-3-5		0815	W	
-3	MW-3-4		0855	W	
-4	MW-3-3		0930	W	
-5	MW-3-2		1015	W	
-6	MW-3-1		1050	W	
-7	MW-17-5		1310	W	
-8	MW-17-4		1350	W	
-9	MW-17-3		1430	W	
-10	MW-17-2		1500	W	
-11	MW-17-1		1530	W	

**Matrix Types:** S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid  
 NO = Miscellaneous NO<sub>2</sub> = Other SS  
 DO = Cl<sub>2</sub> BOD MBAS COT

**Turnaround # of working days:**  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)  
 Lab TAT Approval: \_\_\_\_\_ \*Additional Charges May Apply

**Comments:**  
 PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MS/MSD) 90% Level III and 10% Level IV data validation required; Level IV Notated on C or C  
 NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)

**Global ID:** \_\_\_\_\_  
**Cost Center:**  
 1. Requested By: \_\_\_\_\_ Date: 10/17/19 Time: 1600  
 2. Relinquished By: \_\_\_\_\_ Date: 10/17/19 Time: 4:15  
 3. Received By: \_\_\_\_\_ Date: 10/17/19 Time: 1645

**Matrix:** MS/MSD + 18.6 L Y  
 CR BY DISTRIBUTION  
 SUB OUT   
 SHORT HOLDING TIME

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327-4911 Fax: (661) 327-1918 www.bclabs.com

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Chain of Custody Form

Page 2 of 2

**Client:** Tidewater, Inc.  
**Client:** David Conner  
**Street Address:** 3781 Altucks Drive  
**City:** Powell **State:** OH **Zip:** 43065  
**Phone:** (626) 298-5715 **Fax:** (614) 792-2897  
**Email Address:** david.conner@tideht2o.net  
**Submission #:** 17-35709

**Project Description:** JPL-GW Monitoring  
**Project Code:** 4019  
**Sampler (s):** Blaine Tech

**Analysis Requested:**  
 VOCs EPA 524.2  X  
 TRM: Cr  
 Perchlorate  
 Hexavalent Cr6 - 218.6 (mg/L)  
 Cl, NO3, NO2, SO4  
 Orthophosphate 365.1

**Billing:**  
**Client:** Tidewater  
**Attn:** David Conner  
**Address:** 3781 Altucks Drive  
**City:** Powell **State:** OH **Zip:** 43065  
 Are there any tests with holding times?  Yes  No  
 \*Standard Turnaround = 10

**Matrix Types:** S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other

**Turnaround # of working days:**  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)

**Lab TAT Approval:** \_\_\_\_\_ \*Additional Charges May Apply

**Comments:**  
 PLEASE NOTIFY WHICH SAMPLES TO USE FOR OC (MS/MSD) 90% Level III and 10% Level IV data validation required; Level IV Notated on C of C  
 NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform OC)

**Global ID:** \_\_\_\_\_

**Cost Center:**  
 1. Requisitioned By: \_\_\_\_\_ Date: 10/17/19 Time: 16:00  
 2. Requisitioned By: \_\_\_\_\_ Date: 10/17/19 Time: 4:45  
 3. Requisitioned By: \_\_\_\_\_ Date: 10/17/19 Time: 19:25

**MBU Site:**  
 MBU site  
 CVX RCRA  
 Geotracker 5 File (CA Default)  
 Geotracker 2 File  
 Other (Specify): \_\_\_\_\_

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327 - 4911 Fax: (661) 327 - 1918 www.bclabs.com

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 2

Submission #: 19-35709

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10/17/98 Analyst Init: GSK

Temperature: (A) 1.8 °C / (C) 1.2 °C

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES		E	E	W	E	E	E	E		
4oz / Box / 16oz PE UNPRES										
2oz Cr <sup>4</sup>		D	D	GH	D	D	D	D		
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		F	F	KL	F	F	F	F		
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		ABC	ABC	ABC	ABC	ABC	ABC	ABC		
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEVE										
PCE VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_ Sample Numbering Completed By: GSK Date/Time: 10/17 2012 Rev 21 05/23/2016





BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 19-35709

SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
--	--	--	--	--

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO  
 Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10/17/1928  
 Temperature: (A) 3.5 °C / (C) 2.9 °C Analyst Init: SMK

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	9	10	11	12	5	6	7	8	9	10
QT PE UNPRES	6	E	E	E						
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>+</sup>	D	D	D	D						
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz	F	F	F	F						
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABC	ABC	ABC	ABC						
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_ Date/Time: 10/17/2012 Rev 21 05/23/2016  
 Sample Numbering Completed By: GISP



Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1935709-01</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> TB-4-101719 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/17/2019 19:25 <b>Sampling Date:</b> 10/17/2019 07:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-4-101719 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935709-02</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-3-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/17/2019 19:25 <b>Sampling Date:</b> 10/17/2019 08:15 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-3-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935709-03</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-3-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/17/2019 19:25 <b>Sampling Date:</b> 10/17/2019 08:55 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-3-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935709-04</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-3-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/17/2019 19:25 <b>Sampling Date:</b> 10/17/2019 09:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-3-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935709-05</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-3-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/17/2019 19:25 <b>Sampling Date:</b> 10/17/2019 10:15 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-3-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935709-06</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-3-1 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/17/2019 19:25 <b>Sampling Date:</b> 10/17/2019 10:50 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-3-1 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935709-07</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-17-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/17/2019 19:25 <b>Sampling Date:</b> 10/17/2019 13:10 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-17-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935709-08</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-17-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/17/2019 19:25 <b>Sampling Date:</b> 10/17/2019 13:50 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-17-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935709-09</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-17-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/17/2019 19:25 <b>Sampling Date:</b> 10/17/2019 14:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-17-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935709-10</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 10/17/2019 19:25
	<b>Project Number:</b> NASA/JPL	<b>Sampling Date:</b> 10/17/2019 15:00
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MW-17-2	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Blaine Tech of BTST	<b>Sample Type:</b> Water
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): MW-17-2
		Matrix: WG
		Sample QC Type (SACode): CS
		Cooler ID:

<b>1935709-11</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 10/17/2019 19:25
	<b>Project Number:</b> NASA/JPL	<b>Sampling Date:</b> 10/17/2019 15:30
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MW-17-1	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Blaine Tech of BTST	<b>Sample Type:</b> Water
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): MW-17-1
		Matrix: WG
		Sample QC Type (SACode): CS
		Cooler ID:

<b>1935709-12</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 10/17/2019 19:25
	<b>Project Number:</b> NASA/JPL	<b>Sampling Date:</b> 10/17/2019 15:40
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> EB-4-101719	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Blaine Tech of BTST	<b>Sample Type:</b> Water
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): EB-4-101719
		Matrix: WG
		Sample QC Type (SACode): CS
		Cooler ID:

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Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-01	<b>Client Sample Name:</b> NASA/JPL, TB-4-101719, 10/17/2019 7:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-01	<b>Client Sample Name:</b> NASA/JPL, TB-4-101719, 10/17/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-01	<b>Client Sample Name:</b> NASA/JPL, TB-4-101719, 10/17/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 11:44	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-01	<b>Client Sample Name:</b> NASA/JPL, TB-4-101719, 10/17/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 11:44	MGC	MS-V5	1	B060155

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Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-02	<b>Client Sample Name:</b> NASA/JPL, MW-3-5, 10/17/2019 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
<b>1,1-Dichloroethane</b>	<b>0.17</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.15</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-02	<b>Client Sample Name:</b> NASA/JPL, MW-3-5, 10/17/2019 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935709-02      **Client Sample Name:** NASA/JPL, MW-3-5, 10/17/2019 8:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 12:09	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-02	<b>Client Sample Name:</b> NASA/JPL, MW-3-5, 10/17/2019 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 12:09	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935709-02	<b>Client Sample Name:</b> NASA/JPL, MW-3-5, 10/17/2019 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	0.93	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/06/19 22:00	11/07/19 00:46	SAV	IC6	1	B061518

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935709-02	<b>Client Sample Name:</b> NASA/JPL, MW-3-5, 10/17/2019 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00012	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
<b>Total Recoverable Chromium</b>	<b>3.6</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>		<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 14:00	10/18/19 17:05		CMM	IC-4	1	B060133
2	EPA-200.8	10/21/19 12:35	10/21/19 21:46		ARD	PE-EL2	1	B060105

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Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-03	<b>Client Sample Name:</b> NASA/JPL, MW-3-4, 10/17/2019 8:55:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
<b>1,1-Dichloroethane</b>	<b>0.16</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.15</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-03	<b>Client Sample Name:</b> NASA/JPL, MW-3-4, 10/17/2019 8:55:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935709-03      **Client Sample Name:** NASA/JPL, MW-3-4, 10/17/2019 8:55:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 12:33	MGC	MS-V5	1	B060155

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-03	<b>Client Sample Name:</b> NASA/JPL, MW-3-4, 10/17/2019 8:55:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 12:33	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935709-03	<b>Client Sample Name:</b> NASA/JPL, MW-3-4, 10/17/2019 8:55:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	0.96	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/06/19 22:00	11/07/19 01:01	SAV	IC6	1	B061518

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935709-03	<b>Client Sample Name:</b> NASA/JPL, MW-3-4, 10/17/2019 8:55:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00016	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	95	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 14:00	10/18/19 17:14		CMM	IC-4	1	B060133
2	EPA-200.8	10/21/19 12:35	10/21/19 21:48		ARD	PE-EL2	1	B060105

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Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-04	<b>Client Sample Name:</b> NASA/JPL, MW-3-3, 10/17/2019 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
<b>1,1-Dichloroethane</b>	<b>0.41</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.15</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-04	<b>Client Sample Name:</b> NASA/JPL, MW-3-3, 10/17/2019 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.38</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-04	<b>Client Sample Name:</b> NASA/JPL, MW-3-3, 10/17/2019 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 09:19	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-04	<b>Client Sample Name:</b> NASA/JPL, MW-3-3, 10/17/2019 9:30:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 09:19	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935709-04	<b>Client Sample Name:</b> NASA/JPL, MW-3-3, 10/17/2019 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.4	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/06/19 22:00	11/06/19 23:44	SAV	IC6	1	B061518

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935709-04	<b>Client Sample Name:</b> NASA/JPL, MW-3-3, 10/17/2019 9:30:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0010	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>2.1</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 14:00	10/18/19 16:26		CMM	IC-4	1	B060133
2	EPA-200.8	10/21/19 12:35	10/21/19 21:31		ARD	PE-EL2	1	B060105

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Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-05	<b>Client Sample Name:</b> NASA/JPL, MW-3-2, 10/17/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-05	<b>Client Sample Name:</b> NASA/JPL, MW-3-2, 10/17/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-05	<b>Client Sample Name:</b> NASA/JPL, MW-3-2, 10/17/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	95.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 12:57	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-05	<b>Client Sample Name:</b> NASA/JPL, MW-3-2, 10/17/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 12:57	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935709-05	<b>Client Sample Name:</b> NASA/JPL, MW-3-2, 10/17/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/06/19 22:00	11/07/19 13:13	SAV	IC6	1	B061518

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935709-05	<b>Client Sample Name:</b> NASA/JPL, MW-3-2, 10/17/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 14:00	10/18/19 17:24		CMM	IC-4	1	B060133
2	EPA-200.8	10/21/19 12:35	10/21/19 21:50		ARD	PE-EL2	1	B060105

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Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-06	<b>Client Sample Name:</b> NASA/JPL, MW-3-1, 10/17/2019 10:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-06	<b>Client Sample Name:</b> NASA/JPL, MW-3-1, 10/17/2019 10:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-06	<b>Client Sample Name:</b> NASA/JPL, MW-3-1, 10/17/2019 10:50:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 13:21	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-06	<b>Client Sample Name:</b> NASA/JPL, MW-3-1, 10/17/2019 10:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 13:21	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935709-06	<b>Client Sample Name:</b> NASA/JPL, MW-3-1, 10/17/2019 10:50:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/06/19 22:00	11/07/19 13:29	SAV	IC6	1	B061518

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935709-06	<b>Client Sample Name:</b> NASA/JPL, MW-3-1, 10/17/2019 10:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 14:00	10/18/19 17:33		CMM	IC-4	1	B060133
2	EPA-200.8	10/21/19 12:35	10/21/19 21:52		ARD	PE-EL2	1	B060105

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935709-07 Client Sample Name: NASA/JPL, MW-17-5, 10/17/2019 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.48</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935709-07		Client Sample Name: NASA/JPL, MW-17-5, 10/17/2019 1:10:00PM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.25</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.86</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-07	<b>Client Sample Name:</b> NASA/JPL, MW-17-5, 10/17/2019 1:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	119	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 13:45	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-07	<b>Client Sample Name:</b> NASA/JPL, MW-17-5, 10/17/2019 1:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 13:45	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935709-07	<b>Client Sample Name:</b> NASA/JPL, MW-17-5, 10/17/2019 1:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	4.2	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/06/19 22:00	11/07/19 13:44	SAV	IC6	1	B061518

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935709-07	<b>Client Sample Name:</b> NASA/JPL, MW-17-5, 10/17/2019 1:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0012	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	1.6	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 14:00	10/18/19 18:02		CMM	IC-4	1	B060133
2	EPA-200.8	10/21/19 12:35	10/21/19 21:53		ARD	PE-EL2	1	B060105

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Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935709-08      **Client Sample Name:** NASA/JPL, MW-17-4, 10/17/2019 1:50:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.70</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935709-08 Client Sample Name: NASA/JPL, MW-17-4, 10/17/2019 1:50:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.50</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.87</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935709-08      **Client Sample Name:** NASA/JPL, MW-17-4, 10/17/2019 1:50:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	119	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 14:10	MGC	MS-V5	1	B060155

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-08	<b>Client Sample Name:</b> NASA/JPL, MW-17-4, 10/17/2019 1:50:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 14:10	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935709-08	<b>Client Sample Name:</b> NASA/JPL, MW-17-4, 10/17/2019 1:50:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.8	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/06/19 22:00	11/07/19 14:15	SAV	IC6	1	B061518

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935709-08	<b>Client Sample Name:</b> NASA/JPL, MW-17-4, 10/17/2019 1:50:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0014	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	1.5	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 14:00	10/18/19 18:12		CMM	IC-4	1	B060133
2	EPA-200.8	10/21/19 12:35	10/21/19 21:55		ARD	PE-EL2	1	B060105

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Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935709-09      **Client Sample Name:** NASA/JPL, MW-17-3, 10/17/2019 2:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.42</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
<b>1,1-Dichloroethane</b>	<b>0.17</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.15</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935709-09 Client Sample Name: NASA/JPL, MW-17-3, 10/17/2019 2:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.33</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND	<b>J</b>	<b>1</b>
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>2.0</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		<b>1</b>
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935709-09 Client Sample Name: NASA/JPL, MW-17-3, 10/17/2019 2:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	122	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 14:34	MGC	MS-V5	1	B060155

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-09	<b>Client Sample Name:</b> NASA/JPL, MW-17-3, 10/17/2019 2:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 14:34	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935709-09	<b>Client Sample Name:</b> NASA/JPL, MW-17-3, 10/17/2019 2:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	4.6	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/06/19 22:00	11/07/19 14:46	SAV	IC6	1	B061518

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935709-09	<b>Client Sample Name:</b> NASA/JPL, MW-17-3, 10/17/2019 2:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/18/19 14:00	10/18/19 18:21	CMM	IC-4	1	B060133
2	EPA-200.8	10/21/19 12:35	10/21/19 21:57	ARD	PE-EL2	1	B060105

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Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935709-10 Client Sample Name: NASA/JPL, MW-17-2, 10/17/2019 3:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-10	<b>Client Sample Name:</b> NASA/JPL, MW-17-2, 10/17/2019 3:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935709-10      **Client Sample Name:** NASA/JPL, MW-17-2, 10/17/2019 3:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 14:58	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-10	<b>Client Sample Name:</b> NASA/JPL, MW-17-2, 10/17/2019 3:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 14:58	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935709-10	<b>Client Sample Name:</b> NASA/JPL, MW-17-2, 10/17/2019 3:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/06/19 22:00	11/07/19 15:16	MRC	IC6	1	B061518

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935709-10	<b>Client Sample Name:</b> NASA/JPL, MW-17-2, 10/17/2019 3:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 14:00	10/18/19 18:31		CMM	IC-4	1	B060133
2	EPA-200.8	10/21/19 12:35	10/21/19 21:59		ARD	PE-EL2	1	B060105

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935709-11      **Client Sample Name:** NASA/JPL, MW-17-1, 10/17/2019 3:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935709-11      **Client Sample Name:** NASA/JPL, MW-17-1, 10/17/2019 3:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935709-11      **Client Sample Name:** NASA/JPL, MW-17-1, 10/17/2019 3:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 15:22	MGC	MS-V5	1	B060155

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-11	<b>Client Sample Name:</b> NASA/JPL, MW-17-1, 10/17/2019 3:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 15:22	MGC	MS-V5	1	B060155

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Tidewater Inc.  
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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935709-11	<b>Client Sample Name:</b> NASA/JPL, MW-17-1, 10/17/2019 3:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/06/19 22:00	11/07/19 16:02	MRC	IC6	1	B061518

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935709-11	<b>Client Sample Name:</b> NASA/JPL, MW-17-1, 10/17/2019 3:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000095	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/18/19 14:00	10/18/19 18:41		CMM	IC-4	1	B060133
2	EPA-200.8	10/21/19 12:35	10/21/19 22:00		ARD	PE-EL2	1	B060105

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Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935709-12 Client Sample Name: NASA/JPL, EB-4-101719, 10/17/2019 3:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND	V11	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935709-12	<b>Client Sample Name:</b> NASA/JPL, EB-4-101719, 10/17/2019 3:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935709-12 Client Sample Name: NASA/JPL, EB-4-101719, 10/17/2019 3:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	119	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 15:47	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935709-12	<b>Client Sample Name:</b> NASA/JPL, EB-4-101719, 10/17/2019 3:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/22/19 07:00	10/22/19 15:47	MGC	MS-V5	1	B060155

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935709-12	<b>Client Sample Name:</b> NASA/JPL, EB-4-101719, 10/17/2019 3:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/06/19 22:00	11/07/19 16:18	MRC	IC6	1	B061518

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935709-12	<b>Client Sample Name:</b> NASA/JPL, EB-4-101719, 10/17/2019 3:40:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000040	mg/L	0.00020	0.000032	EPA-218.6	0.000050	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/18/19 21:00	10/19/19 03:42	MRC	IC-4	1	B060137
2	EPA-200.8	10/21/19 12:35	10/21/19 18:50	AS1	PE-EL2	1	B060106

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**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060155</b>						
Benzene	B060155-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B060155-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B060155-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B060155-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B060155-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B060155-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B060155-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B060155-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B060155-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B060155-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B060155-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B060155-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B060155-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B060155-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B060155-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B060155-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B060155-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B060155-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B060155-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B060155-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B060155-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B060155-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B060155-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B060155-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B060155-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B060155-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B060155-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B060155-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B060155-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B060155-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B060155-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B060155-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B060155-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B060155-BLK1	ND	ug/L	0.50	0.14	

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Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060155</b>						
trans-1,3-Dichloropropene	B060155-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B060155-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B060155-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B060155-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B060155-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B060155-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B060155-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B060155-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B060155-BLK1	ND	ug/L	0.50	0.12	
Styrene	B060155-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B060155-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B060155-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B060155-BLK1	ND	ug/L	0.50	0.23	
Toluene	B060155-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B060155-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B060155-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B060155-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B060155-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B060155-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B060155-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B060155-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B060155-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B060155-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B060155-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B060155-BLK1	ND	ug/L	0.50	0.18	
Acetone	B060155-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B060155-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B060155-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B060155-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B060155-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B060155-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B060155-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B060155-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B060155-BLK1	ND	ug/L	4.0	1.3	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060155</b>						
Ethyl t-butyl ether	B060155-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B060155-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B060155-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B060155-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B060155-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B060155-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B060155-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B060155-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B060155-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B060155-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B060155-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B060155-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B060155-BLK1	ND	ug/L	0.50	0.13	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>B060155-BLK1</b>	<b>117</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>B060155-BLK1</b>	<b>96.7</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>B060155-BLK1</b>	<b>92.4</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060155</b>										
Benzene	B060155-BS1	LCS	23.410	25.000	ug/L	93.6		70 - 130		
Bromodichloromethane	B060155-BS1	LCS	27.700	25.000	ug/L	111		70 - 130		
Chlorobenzene	B060155-BS1	LCS	23.460	25.000	ug/L	93.8		70 - 130		
Chloroethane	B060155-BS1	LCS	26.120	25.000	ug/L	104		70 - 130		
1,4-Dichlorobenzene	B060155-BS1	LCS	23.260	25.000	ug/L	93.0		70 - 130		
1,1-Dichloroethane	B060155-BS1	LCS	26.610	25.000	ug/L	106		70 - 130		
1,1-Dichloroethene	B060155-BS1	LCS	26.550	25.000	ug/L	106		70 - 130		
Toluene	B060155-BS1	LCS	23.060	25.000	ug/L	92.2		70 - 130		
Trichloroethene	B060155-BS1	LCS	25.350	25.000	ug/L	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B060155-BS1	LCS	11.250	10.000	ug/L	112		75 - 125		
Toluene-d8 (Surrogate)	B060155-BS1	LCS	10.010	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	B060155-BS1	LCS	10.150	10.000	ug/L	102		80 - 120		

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060155</b>		Used client sample: Y - Description: MW-3-3, 10/17/2019 09:30								
Benzene	MS	1935709-04	ND	23.680	25.000	ug/L		94.7		70 - 130
	MSD	1935709-04	ND	24.290	25.000	ug/L	2.5	97.2	20	70 - 130
Bromodichloromethane	MS	1935709-04	ND	28.310	25.000	ug/L		113		70 - 130
	MSD	1935709-04	ND	28.150	25.000	ug/L	0.6	113	20	70 - 130
Chlorobenzene	MS	1935709-04	ND	23.330	25.000	ug/L		93.3		70 - 130
	MSD	1935709-04	ND	23.700	25.000	ug/L	1.6	94.8	20	70 - 130
Chloroethane	MS	1935709-04	ND	26.790	25.000	ug/L		107		70 - 130
	MSD	1935709-04	ND	27.250	25.000	ug/L	1.7	109	20	70 - 130
1,4-Dichlorobenzene	MS	1935709-04	ND	24.200	25.000	ug/L		96.8		70 - 130
	MSD	1935709-04	ND	24.040	25.000	ug/L	0.7	96.2	20	70 - 130
1,1-Dichloroethane	MS	1935709-04	0.41000	26.770	25.000	ug/L		105		70 - 130
	MSD	1935709-04	0.41000	27.460	25.000	ug/L	2.5	108	20	70 - 130
1,1-Dichloroethene	MS	1935709-04	ND	26.850	25.000	ug/L		107		70 - 130
	MSD	1935709-04	ND	27.220	25.000	ug/L	1.4	109	20	70 - 130
Toluene	MS	1935709-04	ND	23.710	25.000	ug/L		94.8		70 - 130
	MSD	1935709-04	ND	23.920	25.000	ug/L	0.9	95.7	20	70 - 130
Trichloroethene	MS	1935709-04	ND	24.820	25.000	ug/L		99.3		70 - 130
	MSD	1935709-04	ND	25.640	25.000	ug/L	3.3	103	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1935709-04	ND	11.460	10.000	ug/L		115		75 - 125
	MSD	1935709-04	ND	11.190	10.000	ug/L	2.4	112		75 - 125
Toluene-d8 (Surrogate)	MS	1935709-04	ND	9.9200	10.000	ug/L		99.2		80 - 120
	MSD	1935709-04	ND	9.9300	10.000	ug/L	0.1	99.3		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1935709-04	ND	9.8800	10.000	ug/L		98.8		80 - 120
	MSD	1935709-04	ND	10.270	10.000	ug/L	3.9	103		80 - 120

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2) TICs

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060155</b>						
Chloroacetonitrile	B060155-BLK1	0	ug/L			
1-Chlorobutane	B060155-BLK1	0	ug/L			
1,1-Dichloropropanone	B060155-BLK1	0	ug/L			
Methyl acrylate	B060155-BLK1	0	ug/L			
Nitrobenzene	B060155-BLK1	0	ug/L			
2-Nitropropane	B060155-BLK1	0	ug/L			

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B061518</b>						
Perchlorate	B061518-BLK1	ND	ug/L	4.0	0.76	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B061518</b>										
Perchlorate	B061518-BS1	LCS	9.3285	10.000	ug/L	93.3		85	115	

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**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B061518</b>		Used client sample: Y - Description: MW-3-3, 10/17/2019 09:30								
Perchlorate	DUP	1935709-04	1.3897	1.1936		ug/L	15.2		15	J,A02
	MS	1935709-04	1.3897	12.028	10.101	ug/L		105	80 - 120	
	MSD	1935709-04	1.3897	12.327	10.101	ug/L	2.5	108	15 80 - 120	

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060105</b>						
Total Recoverable Chromium	B060105-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B060106</b>						
Total Recoverable Chromium	B060106-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B060133</b>						
Hexavalent Chromium	B060133-BLK1	ND	mg/L	0.00020	0.000032	
<b>QC Batch ID: B060137</b>						
Hexavalent Chromium	B060137-BLK1	0.000050000	mg/L	0.00020	0.000032	J

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Metals Analysis

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab	Quals
								Percent Recovery	RPD		
<b>QC Batch ID: B060105</b>											
Total Recoverable Chromium	B060105-BS1	LCS	44.615	40.000	ug/L	112		85 - 115			
<b>QC Batch ID: B060106</b>											
Total Recoverable Chromium	B060106-BS1	LCS	40.270	40.000	ug/L	101		85 - 115			
<b>QC Batch ID: B060133</b>											
Hexavalent Chromium	B060133-BS1	LCS	0.021437	0.020000	mg/L	107		90 - 110			
<b>QC Batch ID: B060137</b>											
Hexavalent Chromium	B060137-BS1	LCS	0.021423	0.020000	mg/L	107		90 - 110			

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B060105</b>		Used client sample: Y - Description: MW-3-3, 10/17/2019 09:30								
Total Recoverable Chromium	DUP	1935709-04	2.0910	1.7950		ug/L	15.2		20	J
	MS	1935709-04	2.0910	38.791	40.000	ug/L		91.8	70 - 130	
	MSD	1935709-04	2.0910	39.392	40.000	ug/L	1.5	93.3	20 70 - 130	
<b>QC Batch ID: B060106</b>		Used client sample: N								
Total Recoverable Chromium	DUP	1935757-01	0.78100	0.77700		ug/L	0.5		20	J
	MS	1935757-01	0.78100	39.858	40.000	ug/L		97.7	70 - 130	
	MSD	1935757-01	0.78100	36.828	40.000	ug/L	7.9	90.1	20 70 - 130	
<b>QC Batch ID: B060133</b>		Used client sample: Y - Description: MW-3-3, 10/17/2019 09:30								
Hexavalent Chromium	DUP	1935709-04	0.0010380	0.0010520		mg/L	1.3		10	
	MS	1935709-04	0.0010380	0.022028	0.020202	mg/L		104	90 - 110	
	MSD	1935709-04	0.0010380	0.022211	0.020202	mg/L	0.8	105	10 90 - 110	
<b>QC Batch ID: B060137</b>		Used client sample: N								
Hexavalent Chromium	DUP	1935721-01	0.000055000	0.000046000		mg/L	17.8		10	J,A02
	MS	1935721-01	0.000055000	0.021000	0.020202	mg/L		104	90 - 110	
	MSD	1935721-01	0.000055000	0.021185	0.020202	mg/L	0.9	105	10 90 - 110	

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Powell, OH 43065

**Reported:** 11/11/2019 9:11  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- V11 The Continuing Calibration Verification (CCV) recovery was not within established control limits.





Date of Report: 11/11/2019

David Conner

Tidewater Inc.

3761 Attucks Drive

Powell, OH 43065

Client Project: 4Q19

BCL Project: JPL- GW Monitoring Wells

BCL Work Order: 1935863

Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/18/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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BC Laboratories, Inc.

Environmental Testing Laboratory Since 1949

Chain of Custody Form

BC Laboratories, Inc. 19-35863

Report To: Client: Tidewater, Inc. Attn: David Corner  
 Street Address: 3761 Albuca Drive City: Powell State: OH Zip: 43065  
 Phone: (628) 298-5715 Fax: (614) 792-2897  
 Email Address: david.corner@tiden20.net  
 Submission #: \_\_\_\_\_

Project Description: JPL-GW Monitoring  
 Project Code: 4019  
 Sampler (s): Blaine Tech

Analysis Requested:  
 VOCs EPA 524.2  
 TRM: Cr  
 Hexavalent Cr - 28.6 (mg/L)  
 Chlorophenols 265.1  
 Chlorophenols 265.1

Sample #	Sample Description	Date	Time	Matrix*
1	MW-23-5	10/18/19	0745	W
2	MW-23-4		0815	W
3	MW-23-3		0850	W
4	MW-23-2		0915	W
5	MW-23-1		0950	W
6	TB-5-101819		0700	W
7	MW-26-2		1200	W
8	MW-26-1		1245	W
9	EB-5-101819		1300	W

Notes: MS/MSD + Level 4  
 HOLDING TIME  
 CHK BY: DISTRIBUTION  
 SUB OUT

Matrix Types: S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid  
 Turnaround # of working days: 24 Hr Rush 48 Hr Rush 3-5 Day Rush 3-5 Day Rush  
 Lab/TAT Approval: \_\_\_\_\_

Global ID: 1. Received By: MW Date: 10/18/19 Time: 1445  
 2. Received By: MW Date: 10/15/19 Time: 1918  
 3. Received By: MW Date: 10/18/19 Time: 1915

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327-4911 Fax: (661) 327-1918 www.bclabs.com

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BC LABORATORIES INC. COOLER RECEIPT FORM Page / Of

Submission #: 19-35863

SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
--	--	--	--	--

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received  YES  NO Emissivity: 0.95 Container: PE Thermometer ID: 708 Date/Time: 10/18/1915  
 Temperature: (A) 0.9 °C / (C) 0.3 °C Analyst Init: EIK/12mm

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	D	P	P	GH	D		P	D	D	
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup> 106	E	E	E	IT	E		F	E	E	
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz	F	F	F	KL	F		F	F	F	
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
3oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK 94						A				
40ml VOA VIAL	ABC	ABC	ABC	A-F	ABC		ABC	ABC	ABC	
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/508/8080										
QT EPA 515.1/5150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: DM/GAL Date/Time: 10/18/19 20:41 Rev 21 05/23/2016

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935863-01</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-23-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/18/2019 19:15 <b>Sampling Date:</b> 10/18/2019 07:45 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-23-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935863-02</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-23-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/18/2019 19:15 <b>Sampling Date:</b> 10/18/2019 08:15 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-23-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935863-03</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-23-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/18/2019 19:15 <b>Sampling Date:</b> 10/18/2019 08:50 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-23-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1935863-04</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-23-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/18/2019 19:15 <b>Sampling Date:</b> 10/18/2019 09:15 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-23-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935863-05</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-23-1 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/18/2019 19:15 <b>Sampling Date:</b> 10/18/2019 09:50 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-23-1 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935863-06</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> TB-5-101819 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/18/2019 19:15 <b>Sampling Date:</b> 10/18/2019 07:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Trip Blank Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-5-101819 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1935863-07</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-26-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/18/2019 19:15 <b>Sampling Date:</b> 10/18/2019 12:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-26-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935863-08</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-26-1 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/18/2019 19:15 <b>Sampling Date:</b> 10/18/2019 12:45 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-26-1 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935863-09</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> EB-5-101819 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/18/2019 19:15 <b>Sampling Date:</b> 10/18/2019 13:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-5-101819 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935863-01 Client Sample Name: NASA/JPL, MW-23-5, 10/18/2019 7:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935863-01 Client Sample Name: NASA/JPL, MW-23-5, 10/18/2019 7:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
<b>Styrene</b>	<b>0.27</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.12</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935863-01	<b>Client Sample Name:</b> NASA/JPL, MW-23-5, 10/18/2019 7:45:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 10:42	MGC	MS-V5	1	B060236

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935863-01	<b>Client Sample Name:</b> NASA/JPL, MW-23-5, 10/18/2019 7:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 10:42	MGC	MS-V5	1	B060236

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935863-01	<b>Client Sample Name:</b> NASA/JPL, MW-23-5, 10/18/2019 7:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/07/19 22:00	11/08/19 02:19	SAV	IC6	1	B061606

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935863-01	<b>Client Sample Name:</b> NASA/JPL, MW-23-5, 10/18/2019 7:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00010	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/19/19 18:00	10/19/19 19:07		MRC	IC-4	1	B060664
2	EPA-200.8	10/23/19 09:15	10/23/19 15:02		AS1	PE-EL4	1	B060262

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID:	1935863-02							
Client Sample Name:	NASA/JPL, MW-23-4, 10/18/2019 8:15:00AM, Blaine Tech							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935863-02 Client Sample Name: NASA/JPL, MW-23-4, 10/18/2019 8:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935863-02      **Client Sample Name:** NASA/JPL, MW-23-4, 10/18/2019 8:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 11:06	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935863-02	<b>Client Sample Name:</b> NASA/JPL, MW-23-4, 10/18/2019 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 11:06	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935863-02	<b>Client Sample Name:</b> NASA/JPL, MW-23-4, 10/18/2019 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.2	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/07/19 22:00	11/08/19 03:05	SAV	IC6	1	B061606

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935863-02	<b>Client Sample Name:</b> NASA/JPL, MW-23-4, 10/18/2019 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0029	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	2.4	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/19/19 18:00	10/19/19 19:17		MRC	IC-4	1	B060664
2	EPA-200.8	10/23/19 09:15	10/23/19 15:05		AS1	PE-EL4	1	B060262

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Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935863-03	<b>Client Sample Name:</b> NASA/JPL, MW-23-3, 10/18/2019 8:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935863-03 Client Sample Name: NASA/JPL, MW-23-3, 10/18/2019 8:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935863-03      **Client Sample Name:** NASA/JPL, MW-23-3, 10/18/2019 8:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 11:30	MGC	MS-V5	1	B060236

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935863-03	<b>Client Sample Name:</b> NASA/JPL, MW-23-3, 10/18/2019 8:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 11:30	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935863-03	<b>Client Sample Name:</b> NASA/JPL, MW-23-3, 10/18/2019 8:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.6	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/07/19 22:00	11/08/19 10:09	SAV	IC6	1	B061606

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935863-03	<b>Client Sample Name:</b> NASA/JPL, MW-23-3, 10/18/2019 8:50:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0026	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>2.6</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/19/19 18:00	10/19/19 19:26		MRC	IC-4	1	B060664
2	EPA-200.8	10/23/19 09:15	10/23/19 15:07		AS1	PE-EL4	1	B060262

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Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935863-04 Client Sample Name: NASA/JPL, MW-23-2, 10/18/2019 9:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.46</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
<b>1,1-Dichloroethane</b>	<b>0.15</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.15</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935863-04 Client Sample Name: NASA/JPL, MW-23-2, 10/18/2019 9:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.25</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>1.4</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935863-04      **Client Sample Name:** NASA/JPL, MW-23-2, 10/18/2019 9:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/24/19 07:58	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935863-04	<b>Client Sample Name:</b> NASA/JPL, MW-23-2, 10/18/2019 9:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/24/19 07:58	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935863-04	<b>Client Sample Name:</b> NASA/JPL, MW-23-2, 10/18/2019 9:15:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.9	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/07/19 22:00	11/08/19 01:02	SAV	IC6	1	B061606

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935863-04	<b>Client Sample Name:</b> NASA/JPL, MW-23-2, 10/18/2019 9:15:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00086	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	0.60	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/19/19 18:00	10/20/19 13:49		MRC	IC-4	1	B060664
2	EPA-200.8	10/23/19 09:15	10/23/19 14:40		AS1	PE-EL4	1	B060262

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Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935863-05 Client Sample Name: NASA/JPL, MW-23-1, 10/18/2019 9:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935863-05 Client Sample Name: NASA/JPL, MW-23-1, 10/18/2019 9:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935863-05      **Client Sample Name:** NASA/JPL, MW-23-1, 10/18/2019 9:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	121	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 11:54	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935863-05	<b>Client Sample Name:</b> NASA/JPL, MW-23-1, 10/18/2019 9:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 11:54	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935863-05	<b>Client Sample Name:</b> NASA/JPL, MW-23-1, 10/18/2019 9:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.3	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/07/19 22:00	11/08/19 03:36	SAV	IC6	1	B061606

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935863-05	<b>Client Sample Name:</b> NASA/JPL, MW-23-1, 10/18/2019 9:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00044	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>0.59</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/19/19 18:00	10/19/19 19:36	MRC	IC-4	1	B060664
2	EPA-200.8	10/23/19 09:15	10/23/19 15:09	AS1	PE-EL4	1	B060262

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Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935863-06 Client Sample Name: NASA/JPL, TB-5-101819, 10/18/2019 7:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935863-06	<b>Client Sample Name:</b> NASA/JPL, TB-5-101819, 10/18/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935863-06	<b>Client Sample Name:</b> NASA/JPL, TB-5-101819, 10/18/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 12:19	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935863-06	<b>Client Sample Name:</b> NASA/JPL, TB-5-101819, 10/18/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 12:19	MGC	MS-V5	1	B060236

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Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935863-07	<b>Client Sample Name:</b> NASA/JPL, MW-26-2, 10/18/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>1.8</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935863-07 Client Sample Name: NASA/JPL, MW-26-2, 10/18/2019 12:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>2.0</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.20</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935863-07	<b>Client Sample Name:</b> NASA/JPL, MW-26-2, 10/18/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	120	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 12:43	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935863-07	<b>Client Sample Name:</b> NASA/JPL, MW-26-2, 10/18/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 12:43	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935863-07	<b>Client Sample Name:</b> NASA/JPL, MW-26-2, 10/18/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.0	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/07/19 22:00	11/08/19 03:51	SAV	IC6	1	B061606

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935863-07	<b>Client Sample Name:</b> NASA/JPL, MW-26-2, 10/18/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00042	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>1.1</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/19/19 18:00	10/19/19 22:28	MRC	IC-4	1	B060664
2	EPA-200.8	10/23/19 09:15	10/23/19 15:12	AS1	PE-EL4	1	B060262

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Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935863-08	<b>Client Sample Name:</b> NASA/JPL, MW-26-1, 10/18/2019 12:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.77</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935863-08	<b>Client Sample Name:</b> NASA/JPL, MW-26-1, 10/18/2019 12:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>1.6</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.47</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935863-08	<b>Client Sample Name:</b> NASA/JPL, MW-26-1, 10/18/2019 12:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 13:07	MGC	MS-V5	1	B060236

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935863-08	<b>Client Sample Name:</b> NASA/JPL, MW-26-1, 10/18/2019 12:45:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 13:07	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935863-08	<b>Client Sample Name:</b> NASA/JPL, MW-26-1, 10/18/2019 12:45:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.8	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/07/19 22:00	11/08/19 10:55	SAV	IC6	1	B061606

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935863-08	<b>Client Sample Name:</b> NASA/JPL, MW-26-1, 10/18/2019 12:45:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000048	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/19/19 18:00	10/19/19 22:37		MRC	IC-4	1	B060664
2	EPA-200.8	10/23/19 09:15	10/23/19 15:14		AS1	PE-EL4	1	B060262

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**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID:	1935863-09	Client Sample Name:	NASA/JPL, EB-5-101819, 10/18/2019 1:00:00PM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #	
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1	
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1	
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1	
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1	
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1	
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1	
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1	
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1	
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1	
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1	
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1	
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1	
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1	
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1	
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1	
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1	
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1	
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1	
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1	
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1	
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1	
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1	
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1	
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1	
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1	
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1	
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1	
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1	
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1	
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1	
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1	
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1	

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**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935863-09	<b>Client Sample Name:</b> NASA/JPL, EB-5-101819, 10/18/2019 1:00:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935863-09	<b>Client Sample Name:</b> NASA/JPL, EB-5-101819, 10/18/2019 1:00:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	117	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 13:31	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935863-09	<b>Client Sample Name:</b> NASA/JPL, EB-5-101819, 10/18/2019 1:00:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/23/19 07:00	10/23/19 13:31	MGC	MS-V5	1	B060236

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935863-09	<b>Client Sample Name:</b> NASA/JPL, EB-5-101819, 10/18/2019 1:00:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/07/19 22:00	11/08/19 04:22	SAV	IC6	1	B061606

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935863-09	<b>Client Sample Name:</b> NASA/JPL, EB-5-101819, 10/18/2019 1:00:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000040	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/19/19 18:00	10/19/19 22:47		MRC	IC-4	1	B060664
2	EPA-200.8	10/23/19 09:15	10/23/19 15:16		AS1	PE-EL4	1	B060262

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Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060236</b>						
Benzene	B060236-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B060236-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B060236-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B060236-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B060236-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B060236-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B060236-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B060236-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B060236-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B060236-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B060236-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B060236-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B060236-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B060236-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B060236-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B060236-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B060236-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B060236-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B060236-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B060236-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B060236-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B060236-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B060236-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B060236-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B060236-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B060236-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B060236-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B060236-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B060236-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B060236-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B060236-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B060236-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B060236-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B060236-BLK1	ND	ug/L	0.50	0.14	

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060236</b>						
trans-1,3-Dichloropropene	B060236-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B060236-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B060236-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B060236-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B060236-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B060236-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B060236-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B060236-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B060236-BLK1	ND	ug/L	0.50	0.12	
Styrene	B060236-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B060236-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B060236-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B060236-BLK1	ND	ug/L	0.50	0.23	
Toluene	B060236-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B060236-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B060236-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B060236-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B060236-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B060236-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B060236-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B060236-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B060236-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B060236-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B060236-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B060236-BLK1	ND	ug/L	0.50	0.18	
Acetone	B060236-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B060236-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B060236-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B060236-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B060236-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B060236-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B060236-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B060236-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B060236-BLK1	ND	ug/L	4.0	1.3	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060236</b>						
Ethyl t-butyl ether	B060236-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B060236-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B060236-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B060236-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B060236-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B060236-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B060236-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B060236-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B060236-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B060236-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B060236-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B060236-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B060236-BLK1	ND	ug/L	0.50	0.13	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>B060236-BLK1</b>	<b>108</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>B060236-BLK1</b>	<b>102</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>B060236-BLK1</b>	<b>106</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060236</b>										
Benzene	B060236-BS1	LCS	24.120	25.000	ug/L	96.5		70 - 130		
Bromodichloromethane	B060236-BS1	LCS	26.750	25.000	ug/L	107		70 - 130		
Chlorobenzene	B060236-BS1	LCS	23.720	25.000	ug/L	94.9		70 - 130		
Chloroethane	B060236-BS1	LCS	27.140	25.000	ug/L	109		70 - 130		
1,4-Dichlorobenzene	B060236-BS1	LCS	22.240	25.000	ug/L	89.0		70 - 130		
1,1-Dichloroethane	B060236-BS1	LCS	26.480	25.000	ug/L	106		70 - 130		
1,1-Dichloroethene	B060236-BS1	LCS	26.000	25.000	ug/L	104		70 - 130		
Toluene	B060236-BS1	LCS	21.680	25.000	ug/L	86.7		70 - 130		
Trichloroethene	B060236-BS1	LCS	23.790	25.000	ug/L	95.2		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B060236-BS1	LCS	10.810	10.000	ug/L	108		75 - 125		
Toluene-d8 (Surrogate)	B060236-BS1	LCS	10.160	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	B060236-BS1	LCS	10.530	10.000	ug/L	105		80 - 120		

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060236</b>		Used client sample: Y - Description: MW-23-2, 10/18/2019 09:15								
Benzene	MS	1935863-04	ND	25.280	25.000	ug/L		101		70 - 130
	MSD	1935863-04	ND	24.940	25.000	ug/L	1.4	99.8	20	70 - 130
Bromodichloromethane	MS	1935863-04	ND	27.870	25.000	ug/L		111		70 - 130
	MSD	1935863-04	ND	27.670	25.000	ug/L	0.7	111	20	70 - 130
Chlorobenzene	MS	1935863-04	ND	23.890	25.000	ug/L		95.6		70 - 130
	MSD	1935863-04	ND	23.170	25.000	ug/L	3.1	92.7	20	70 - 130
Chloroethane	MS	1935863-04	ND	27.950	25.000	ug/L		112		70 - 130
	MSD	1935863-04	ND	28.140	25.000	ug/L	0.7	113	20	70 - 130
1,4-Dichlorobenzene	MS	1935863-04	ND	22.970	25.000	ug/L		91.9		70 - 130
	MSD	1935863-04	ND	22.600	25.000	ug/L	1.6	90.4	20	70 - 130
1,1-Dichloroethane	MS	1935863-04	0.15000	27.480	25.000	ug/L		109		70 - 130
	MSD	1935863-04	0.15000	27.560	25.000	ug/L	0.3	110	20	70 - 130
1,1-Dichloroethene	MS	1935863-04	ND	26.670	25.000	ug/L		107		70 - 130
	MSD	1935863-04	ND	26.450	25.000	ug/L	0.8	106	20	70 - 130
Toluene	MS	1935863-04	ND	23.020	25.000	ug/L		92.1		70 - 130
	MSD	1935863-04	ND	22.820	25.000	ug/L	0.9	91.3	20	70 - 130
Trichloroethene	MS	1935863-04	1.3500	26.030	25.000	ug/L		98.7		70 - 130
	MSD	1935863-04	1.3500	26.000	25.000	ug/L	0.1	98.6	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1935863-04	ND	10.180	10.000	ug/L		102		75 - 125
	MSD	1935863-04	ND	10.710	10.000	ug/L	5.1	107		75 - 125
Toluene-d8 (Surrogate)	MS	1935863-04	ND	10.210	10.000	ug/L		102		80 - 120
	MSD	1935863-04	ND	10.320	10.000	ug/L	1.1	103		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1935863-04	ND	10.270	10.000	ug/L		103		80 - 120
	MSD	1935863-04	ND	10.190	10.000	ug/L	0.8	102		80 - 120

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2) TICs

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060236</b>						
Chloroacetonitrile	B060236-BLK1	0	ug/L			
1-Chlorobutane	B060236-BLK1	0	ug/L			
1,1-Dichloropropanone	B060236-BLK1	0	ug/L			
Methyl acrylate	B060236-BLK1	0	ug/L			
Nitrobenzene	B060236-BLK1	0	ug/L			
2-Nitropropane	B060236-BLK1	0	ug/L			

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B061606</b>						
Perchlorate	B061606-BLK1	ND	ug/L	4.0	0.76	

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**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B061606</b>										
Perchlorate	B061606-BS1	LCS	9.6020	10.000	ug/L	96.0		85	115	

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**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B061606</b>		Used client sample: Y - Description: MW-23-2, 10/18/2019 09:15								
Perchlorate	DUP	1935863-04	3.9423	3.5167		ug/L	11.4		15	J
	MS	1935863-04	3.9423	15.000	10.101	ug/L		109	80 - 120	
	MSD	1935863-04	3.9423	15.034	10.101	ug/L	0.2	110	15 80 - 120	

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060262</b>						
Total Recoverable Chromium	B060262-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B060664</b>						
Hexavalent Chromium	B060664-BLK1	ND	mg/L	0.00020	0.000032	

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Tidewater Inc.  
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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Metals Analysis

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060262</b>										
Total Recoverable Chromium	B060262-BS1	LCS	39.844	40.000	ug/L	99.6		85 - 115		
<b>QC Batch ID: B060664</b>										
Hexavalent Chromium	B060664-BS1	LCS	0.021641	0.020000	mg/L	108		90 - 110		

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060262</b>		Used client sample: Y - Description: MW-23-2, 10/18/2019 09:15								
Total Recoverable Chromium	DUP	1935863-04	0.60100	0.61300		ug/L	2.0		20	J
	MS	1935863-04	0.60100	39.132	40.000	ug/L		96.3	70 - 130	
	MSD	1935863-04	0.60100	39.661	40.000	ug/L	1.3	97.6	20 70 - 130	
<b>QC Batch ID: B060664</b>		Used client sample: Y - Description: MW-23-2, 10/18/2019 09:15								
Hexavalent Chromium	DUP	935863-04RE2	0.00086500	0.00083300		mg/L	3.8		10	
	MS	935863-04RE2	0.00086500	0.022626	0.020202	mg/L		108	90 - 110	
	MSD	935863-04RE2	0.00086500	0.022980	0.020202	mg/L	1.6	109	10 90 - 110	

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Powell, OH 43065

**Reported:** 11/11/2019 9:28  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- V11 The Continuing Calibration Verification (CCV) recovery was not within established control limits.



Date of Report: 11/12/2019

David Conner

Tidewater Inc.

3761 Attucks Drive

Powell, OH 43065

Client Project: 4Q19

BCL Project: JPL- GW Monitoring Wells

BCL Work Order: 1935983

Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/21/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda

Client Service Rep

Stuart Buttram

Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Chain of Custody Form

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**Required Fields**

Report To: **Tidewater, Inc.**  
 Client: **David Conner**  
 Attn: **David Conner**  
 Street Address: **3761 Altucks Drive**  
 City: **Powell** State: **OH** Zip: **43065**  
 Phone: **626 1288 - 5715** Fax: **614 792 - 2897**  
 Email Address: **david.conner@tidelco.net**  
 Submission #: **19-35983**

Project Description: **JPL-GW Monitoring**  
 Project Code: **4Q19**  
 Sampler (s): **Blaire Tech**

**Analysis Requested**

Sample #	Sample Description	Date	Time	Matrix*
-1	TR-6-10-2119	10/21/19	0700	W
-2	MW-4-5		0735	W
-3	MW-4-4		0810	W
-4	MW-4-3		0845	W
-5	MW-4-2		0915	W
-6	MW-4-1		0940	W
-7	MW-12-5		1120	W
-8	MW-12-4		1200	W
-9	MW-12-3		1230	W
-10	MW-12-2		1300	W
-11	MW-12-1		1330	W

**Analysis Requested**

Analysis Requested	Hexavalent Cr-218.6 (mg/L)	Perchlorate	TRM: Cr	VOCs EPA 524.2	3-5 Day Rush	48 Hr Rush	24 Hr Rush
Orthophosphate 365.1					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CI, NO3, NO2, SO4	X	X	X	X	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CHK BY: DISTRIBUTION	X	X	X	X	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SHORT HOLDING TIME	X	X	X	X	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CI-19 NO2 NO3 OP SS	X	X	X	X	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DOD CL2 BOD MBAS COT	X	X	X	X	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Billing**

Client: **Tidewater**  
 Attn: **David Conner**  
 Address: **3761 Altucks Drive**  
 City: **Powell** State: **OH** Zip: **43065**  
 Are there any tests with holding times? less than or equal to 48 hours?  
 Yes  No  
 \*Standard Turnaround = 10

**Notes**

CHK BY: DISTRIBUTION  
 J.M. WALKER  
 SUB OUT

9.6  
 SHORT HOLDING TIME  
 CI-19 NO2 NO3 OP SS  
 DOD CL2 BOD MBAS COT

**Matrix Types:** S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other

**Turnaround # of working days:**  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)

Lab TAT Approval: \_\_\_\_\_ \*Additional Charges May Apply

**Comments:**

PLEASE NOTATE WHICH SAMPLES TO USE FOR  
 QC (MS/MSD)  
 90% Level III and 10% Level IV data validation  
 required: Level IV Notated on C of C  
 NOTE: ALL ANALYSIS REQUIRED TO HAVE  
 CALIBRATION SUMMARIES (Inform OC)

**Cost Center:**

1. Requisitioned By: \_\_\_\_\_ Date: 10/21/19 Time: 1410  
 2. Requisitioned By: **Carol Bloomberg** Date: 10-21-19 Time: 6:59  
 3. Requisitioned By: **Michelle** Date: 10/21/19 Time: 2:10

**Global ID:**

1. Received By: \_\_\_\_\_ Date: 10/21/19 Time: 1420  
 2. Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 3. Received By: \_\_\_\_\_ Date: 10/21/19 Time: 2010

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327 - 4911 Fax: (661) 327 - 1918 www.bclabs.com

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**Chain of Custody Form**

Page 2 of 2



\*Required Fields

Report To: Tidewater, Inc. Client: David Corrier		Billing Client: Tidewater Attn: David Corrier	
Street Address: 3761 Allucks Drive City: Powell State: OH Zip: 43065		Address: 3781 Allucks Drive City: Powell State: OH Zip: 43065	
Phone: 628-288-5715 Fax: 614-792-2897		Are there any tests with holding times? less than or equal to 48 hours? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Email Address: david.corrier@tidish2o.net		Standard Turnaround = 10	
Submission #: 19-35983		Notes	

Sample #	Sample Description	Date		Time	Matrix*	Analysis Requested																	
						VOCs EPA 524.2	TRM: C	Perchlorate	Hexavalent Cr 2-18.6 (mg/L)	Cl, NO3, NO2, SO4	Orthophosphate 365.1												
-11	EB-6-102119	10/21/19		1330	W	X	X	X	X	X													
-12	SB-2-102119			1335	W	X	X	X	X	X													

Matrix Types: S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other

Turnaround # of working days:  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)

Lab TAT Approval: \_\_\_\_\_ \*Additional Charges May Apply

Comments: PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MS/MSD) 90% Level III and 10% Level IV data validation required; Level IV Notated on C of C NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)	MBU site <input type="checkbox"/>		Global ID:	
	CVX ROBA <input type="checkbox"/>		1. Requested By: _____	Time _____
	Geotracker 5 File (CA Default) <input type="checkbox"/>		Date 10/21/19	Date 10-21-19
Geotracker 2 File <input type="checkbox"/>		2. Returned By: _____		Time _____
Other (Specify) _____		Date 10/21/19	Date 10/21/19	Time 1830
		3. Returned By: _____		Time _____

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 3

Submission #: 19-35983

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  Non-  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10-21-19 20:10

Temperature: (A) 1.8 °C / (C) 1.2 °C Analyst Init: Emm

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES		D	D	D	D	D	D	D	D	D
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6</sup>		F	F	F	F	F	F	F	F	F
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		E	E	E	E	E	E	E	E	E
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		ABC	ABC	ABC	ABC	ABC	ABC	ABC	ABC	ABC
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT RPA 502/610/6380										
QT RPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz RPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEFLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_ Date/Time: 10/21 2050 Rev 21 05/23/2016

Sample Numbering Completed By: CSJ

A = Actual / C = Corrected

12/17/2016 WordPerfect/LAB\_DOCX/FORMS/ISS/AMR/REV 201



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 3

Submission #: 19-35983

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received:  YES  NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10-21-19 20:10

Temperature: (A) 1.8 °C / (C) 1.2 °C Analyst Init: EMM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	11	12	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>++</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL		ABC	ABC							
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/508/508										
QT EPA 515.1/5150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERREROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_ Date/Time: 10/21 2050 Rev 21 05/23/2016

Sample Numbering Completed By: GSP

A = Actual / C = Corrected

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BC LABORATORIES INC.		COOLER RECEIPT FORM		Page <u>3</u> of <u>3</u>
Submission #: <u>19-35983</u>				
SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/> W / S
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments: _____				
Custody Seals: Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> Non- <input checked="" type="checkbox"/> Comments: _____				
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.95</u> Container: <u>PE</u> Thermometer ID: <u>208</u>		Date/Time <u>10-21-19 20:10</u>
		Temperature: (A) <u>0.8</u> °C / (C) <u>0.2</u> °C		Analyst Init <u>EMM</u>

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	(1)	(2)	3	4	5	6	7	8	9	10
QT PE UNPRES	D	D								
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>	F	F								
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz	E	E								
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/508/5080										
QT EPA 515.1/5150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.I										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8210										
8oz / 16oz / 32oz AMBR										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: GSL Date/Time: 10/21/2019 Rev 21 05/23/2016  
 A = Actual / C = Corrected

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1935983-01</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> TB-6-102119 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/21/2019 20:10 <b>Sampling Date:</b> 10/21/2019 07:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-6-102119 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1935983-02</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-4-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/21/2019 20:10 <b>Sampling Date:</b> 10/21/2019 07:35 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-4-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

<b>1935983-03</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-4-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/21/2019 20:10 <b>Sampling Date:</b> 10/21/2019 08:10 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-4-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1935983-04</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 10/21/2019 20:10
	<b>Project Number:</b> NASA/JPL	<b>Sampling Date:</b> 10/21/2019 08:45
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MW-4-3	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Blaine Tech of BTST	<b>Sample Type:</b> Water
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): MW-4-3
		Matrix: WG
		Sample QC Type (SACode): CS
		Cooler ID:

<b>1935983-05</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 10/21/2019 20:10
	<b>Project Number:</b> NASA/JPL	<b>Sampling Date:</b> 10/21/2019 09:15
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MW-4-2	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Blaine Tech of BTST	<b>Sample Type:</b> Water
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): MW-4-2
		Matrix: WG
		Sample QC Type (SACode): CS
		Cooler ID:

<b>1935983-06</b>	<b>COC Number:</b> ---	<b>Receive Date:</b> 10/21/2019 20:10
	<b>Project Number:</b> NASA/JPL	<b>Sampling Date:</b> 10/21/2019 09:40
	<b>Sampling Location:</b> ---	<b>Sample Depth:</b> ---
	<b>Sampling Point:</b> MW-4-1	<b>Lab Matrix:</b> Water
	<b>Sampled By:</b> Blaine Tech of BTST	<b>Sample Type:</b> Water
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): MW-4-1
		Matrix: WG
		Sample QC Type (SACode): CS
		Cooler ID:

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1935983-07</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-12-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/21/2019 20:10 <b>Sampling Date:</b> 10/21/2019 11:20 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-12-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935983-08</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-12-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/21/2019 20:10 <b>Sampling Date:</b> 10/21/2019 12:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-12-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1935983-09</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-12-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/21/2019 20:10 <b>Sampling Date:</b> 10/21/2019 12:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-12-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1935983-10</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-12-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/21/2019 20:10 <b>Sampling Date:</b> 10/21/2019 13:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-12-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1935983-11</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> EB-6-102119 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/21/2019 20:10 <b>Sampling Date:</b> 10/21/2019 13:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-6-102119 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1935983-12</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> SB-2-102119 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/21/2019 20:10 <b>Sampling Date:</b> 10/21/2019 13:35 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): SB-2-102119 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935983-01 Client Sample Name: NASA/JPL, TB-6-102119, 10/21/2019 7:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935983-01		Client Sample Name: NASA/JPL, TB-6-102119, 10/21/2019 7:00:00AM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-01	<b>Client Sample Name:</b> NASA/JPL, TB-6-102119, 10/21/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 10:50	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-01	<b>Client Sample Name:</b> NASA/JPL, TB-6-102119, 10/21/2019 7:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 10:50	MGC	MS-V5	1	B060237

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Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-02	<b>Client Sample Name:</b> NASA/JPL, MW-4-5, 10/21/2019 7:35:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-02	<b>Client Sample Name:</b> NASA/JPL, MW-4-5, 10/21/2019 7:35:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.54</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-02	<b>Client Sample Name:</b> NASA/JPL, MW-4-5, 10/21/2019 7:35:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	110	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 11:14	MGC	MS-V5	1	B060237

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-02	<b>Client Sample Name:</b> NASA/JPL, MW-4-5, 10/21/2019 7:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 11:14	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935983-02	<b>Client Sample Name:</b> NASA/JPL, MW-4-5, 10/21/2019 7:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/09/19 01:30	MRC	IC6	1	B061722

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935983-02	<b>Client Sample Name:</b> NASA/JPL, MW-4-5, 10/21/2019 7:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>9.5</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/23/19 08:00	10/23/19 09:30	SAV	IC-4	1	B060279
2	EPA-200.8	10/24/19 10:00	10/24/19 14:29	AS1	PE-EL2	1	B060353

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Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935983-03 Client Sample Name: NASA/JPL, MW-4-4, 10/21/2019 8:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-03	<b>Client Sample Name:</b> NASA/JPL, MW-4-4, 10/21/2019 8:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.56</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-03	<b>Client Sample Name:</b> NASA/JPL, MW-4-4, 10/21/2019 8:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 11:38	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-03	<b>Client Sample Name:</b> NASA/JPL, MW-4-4, 10/21/2019 8:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 11:38	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935983-03	<b>Client Sample Name:</b> NASA/JPL, MW-4-4, 10/21/2019 8:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/08/19 20:54	MRC	IC6	1	B061722

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935983-03	<b>Client Sample Name:</b> NASA/JPL, MW-4-4, 10/21/2019 8:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/23/19 08:00	10/23/19 10:08		MRC	IC-4	1	B060279
2	EPA-200.8	10/24/19 10:00	10/24/19 14:46		AS1	PE-EL2	1	B060353

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Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-04	<b>Client Sample Name:</b> NASA/JPL, MW-4-3, 10/21/2019 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-04	<b>Client Sample Name:</b> NASA/JPL, MW-4-3, 10/21/2019 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.56</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-04	<b>Client Sample Name:</b> NASA/JPL, MW-4-3, 10/21/2019 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 12:02	MGC	MS-V5	1	B060237

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-04	<b>Client Sample Name:</b> NASA/JPL, MW-4-3, 10/21/2019 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 12:02	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935983-04	<b>Client Sample Name:</b> NASA/JPL, MW-4-3, 10/21/2019 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/08/19 21:09	MRC	IC6	1	B061722

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935983-04	<b>Client Sample Name:</b> NASA/JPL, MW-4-3, 10/21/2019 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>3.8</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/23/19 08:00	10/23/19 10:18		MRC	IC-4	1	B060279
2	EPA-200.8	10/24/19 10:00	10/24/19 14:48		AS1	PE-EL2	1	B060353

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Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-05	<b>Client Sample Name:</b> NASA/JPL, MW-4-2, 10/21/2019 9:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.46</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-05	<b>Client Sample Name:</b> NASA/JPL, MW-4-2, 10/21/2019 9:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.41</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-05	<b>Client Sample Name:</b> NASA/JPL, MW-4-2, 10/21/2019 9:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	111	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 12:27	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-05	<b>Client Sample Name:</b> NASA/JPL, MW-4-2, 10/21/2019 9:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 12:27	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935983-05	<b>Client Sample Name:</b> NASA/JPL, MW-4-2, 10/21/2019 9:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	32	ug/L	8.0	1.5	EPA-314.0	ND	A07	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/09/19 02:31	MRC	IC6	2	B061722

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935983-05	<b>Client Sample Name:</b> NASA/JPL, MW-4-2, 10/21/2019 9:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00073	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>1.4</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/23/19 08:00	10/23/19 10:28		MRC	IC-4	1	B060279
2	EPA-200.8	10/24/19 10:00	10/24/19 14:50		AS1	PE-EL2	1	B060353

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Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935983-06 Client Sample Name: NASA/JPL, MW-4-1, 10/21/2019 9:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-06	<b>Client Sample Name:</b> NASA/JPL, MW-4-1, 10/21/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935983-06      **Client Sample Name:** NASA/JPL, MW-4-1, 10/21/2019 9:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 12:51	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-06	<b>Client Sample Name:</b> NASA/JPL, MW-4-1, 10/21/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 12:51	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935983-06	<b>Client Sample Name:</b> NASA/JPL, MW-4-1, 10/21/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/08/19 22:11	MRC	IC6	1	B061722

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935983-06	<b>Client Sample Name:</b> NASA/JPL, MW-4-1, 10/21/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000059	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/23/19 08:00	10/23/19 10:37		MRC	IC-4	1	B060279
2	EPA-200.8	10/24/19 10:00	10/24/19 14:51		AS1	PE-EL2	1	B060353

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Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-07	<b>Client Sample Name:</b> NASA/JPL, MW-12-5, 10/21/2019 11:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.27</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-07	<b>Client Sample Name:</b> NASA/JPL, MW-12-5, 10/21/2019 11:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935983-07      **Client Sample Name:** NASA/JPL, MW-12-5, 10/21/2019 11:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	107	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 13:15	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-07	<b>Client Sample Name:</b> NASA/JPL, MW-12-5, 10/21/2019 11:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 13:15	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935983-07	<b>Client Sample Name:</b> NASA/JPL, MW-12-5, 10/21/2019 11:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.7	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/08/19 22:26	MRC	IC6	1	B061722

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935983-07	<b>Client Sample Name:</b> NASA/JPL, MW-12-5, 10/21/2019 11:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00099	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	0.61	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/23/19 08:00	10/23/19 11:06		MRC	IC-4	1	B060279
2	EPA-200.8	10/24/19 10:00	10/24/19 14:53		AS1	PE-EL2	1	B060353

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Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-08	<b>Client Sample Name:</b> NASA/JPL, MW-12-4, 10/21/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
<b>Carbon tetrachloride</b>	<b>0.24</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.17</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.37</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935983-08      **Client Sample Name:** NASA/JPL, MW-12-4, 10/21/2019 12:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-08	<b>Client Sample Name:</b> NASA/JPL, MW-12-4, 10/21/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 13:40	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-08	<b>Client Sample Name:</b> NASA/JPL, MW-12-4, 10/21/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 13:40	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935983-08	<b>Client Sample Name:</b> NASA/JPL, MW-12-4, 10/21/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.1	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/08/19 22:41	MRC	IC6	1	B061722

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935983-08	<b>Client Sample Name:</b> NASA/JPL, MW-12-4, 10/21/2019 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00055	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/23/19 08:00	10/23/19 11:16		MRC	IC-4	1	B060279
2	EPA-200.8	10/24/19 10:00	10/24/19 14:55		AS1	PE-EL2	1	B060353

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Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-09	<b>Client Sample Name:</b> NASA/JPL, MW-12-3, 10/21/2019 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
<b>Carbon tetrachloride</b>	<b>0.76</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.17</b>	<b>EPA-524.2</b>	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.68</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-09	<b>Client Sample Name:</b> NASA/JPL, MW-12-3, 10/21/2019 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935983-09      **Client Sample Name:** NASA/JPL, MW-12-3, 10/21/2019 12:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	109	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 14:04	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-09	<b>Client Sample Name:</b> NASA/JPL, MW-12-3, 10/21/2019 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 14:04	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935983-09	<b>Client Sample Name:</b> NASA/JPL, MW-12-3, 10/21/2019 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.6	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/08/19 22:57	MRC	IC6	1	B061722

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935983-09	<b>Client Sample Name:</b> NASA/JPL, MW-12-3, 10/21/2019 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00021	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/23/19 08:00	10/23/19 11:25		MRC	IC-4	1	B060279
2	EPA-200.8	10/24/19 10:00	10/24/19 14:57		AS1	PE-EL2	1	B060353

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Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935983-10 Client Sample Name: NASA/JPL, MW-12-2, 10/21/2019 1:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1935983-10      **Client Sample Name:** NASA/JPL, MW-12-2, 10/21/2019 1:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-10	<b>Client Sample Name:</b> NASA/JPL, MW-12-2, 10/21/2019 1:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	107	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 14:28	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-10	<b>Client Sample Name:</b> NASA/JPL, MW-12-2, 10/21/2019 1:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 14:28	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935983-10	<b>Client Sample Name:</b> NASA/JPL, MW-12-2, 10/21/2019 1:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	0.97	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/08/19 23:12	MRC	IC6	1	B061722

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935983-10	<b>Client Sample Name:</b> NASA/JPL, MW-12-2, 10/21/2019 1:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000069	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	0.53	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/23/19 08:00	10/23/19 11:35		MRC	IC-4	1	B060279
2	EPA-200.8	10/24/19 10:00	10/24/19 14:58		AS1	PE-EL2	1	B060353

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Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935983-11 Client Sample Name: NASA/JPL, EB-6-102119, 10/21/2019 1:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935983-11		Client Sample Name: NASA/JPL, EB-6-102119, 10/21/2019 1:30:00PM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-11	<b>Client Sample Name:</b> NASA/JPL, EB-6-102119, 10/21/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 14:52	MGC	MS-V5	1	B060237

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-11	<b>Client Sample Name:</b> NASA/JPL, EB-6-102119, 10/21/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 14:52	MGC	MS-V5	1	B060237

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935983-11	<b>Client Sample Name:</b> NASA/JPL, EB-6-102119, 10/21/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/08/19 23:27	MRC	IC6	1	B061722

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935983-11	<b>Client Sample Name:</b> NASA/JPL, EB-6-102119, 10/21/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000046	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/23/19 08:00	10/23/19 11:44	MRC	IC-4	1	B060279
2	EPA-200.8	10/24/19 10:00	10/24/19 15:00	AS1	PE-EL2	1	B060353

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Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1935983-12 Client Sample Name: NASA/JPL, SB-2-102119, 10/21/2019 1:35:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-12	<b>Client Sample Name:</b> NASA/JPL, SB-2-102119, 10/21/2019 1:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1935983-12	<b>Client Sample Name:</b> NASA/JPL, SB-2-102119, 10/21/2019 1:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	109	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 15:17	MGC	MS-V5	1	B060237

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Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1935983-12	<b>Client Sample Name:</b> NASA/JPL, SB-2-102119, 10/21/2019 1:35:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/24/19 07:00	10/24/19 15:17	MGC	MS-V5	1	B060237

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1935983-12	<b>Client Sample Name:</b> NASA/JPL, SB-2-102119, 10/21/2019 1:35:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 18:00	11/08/19 23:43	MRC	IC6	1	B061722

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1935983-12	<b>Client Sample Name:</b> NASA/JPL, SB-2-102119, 10/21/2019 1:35:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000042	mg/L	0.00020	0.000032	EPA-218.6	0.000033	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/23/19 11:00	10/23/19 12:13		MRC	IC-4	1	B060280
2	EPA-200.8	10/24/19 10:00	10/24/19 15:45		AS1	PE-EL2	1	B060354

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**Reported:** 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060237</b>						
Benzene	B060237-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B060237-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B060237-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B060237-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B060237-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B060237-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B060237-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B060237-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B060237-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B060237-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B060237-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B060237-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B060237-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B060237-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B060237-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B060237-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B060237-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B060237-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B060237-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B060237-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B060237-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B060237-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B060237-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B060237-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B060237-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B060237-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B060237-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B060237-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B060237-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B060237-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B060237-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B060237-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B060237-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B060237-BLK1	ND	ug/L	0.50	0.14	

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Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060237</b>						
trans-1,3-Dichloropropene	B060237-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B060237-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B060237-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B060237-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B060237-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B060237-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B060237-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B060237-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B060237-BLK1	ND	ug/L	0.50	0.12	
Styrene	B060237-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B060237-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B060237-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B060237-BLK1	ND	ug/L	0.50	0.23	
Toluene	B060237-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B060237-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B060237-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B060237-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B060237-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B060237-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B060237-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B060237-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B060237-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B060237-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B060237-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B060237-BLK1	ND	ug/L	0.50	0.18	
Acetone	B060237-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B060237-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B060237-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B060237-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B060237-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B060237-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B060237-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B060237-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B060237-BLK1	ND	ug/L	4.0	1.3	

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**Reported:** 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060237</b>						
Ethyl t-butyl ether	B060237-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B060237-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B060237-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B060237-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B060237-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B060237-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B060237-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B060237-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B060237-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B060237-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B060237-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B060237-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B060237-BLK1	ND	ug/L	0.50	0.13	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>B060237-BLK1</b>	<b>107</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>B060237-BLK1</b>	<b>101</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>B060237-BLK1</b>	<b>98.7</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

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**Project Number:** 4Q19  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060237</b>										
Benzene	B060237-BS1	LCS	23.350	25.000	ug/L	93.4		70 - 130		
Bromodichloromethane	B060237-BS1	LCS	28.120	25.000	ug/L	112		70 - 130		
Chlorobenzene	B060237-BS1	LCS	22.950	25.000	ug/L	91.8		70 - 130		
Chloroethane	B060237-BS1	LCS	25.540	25.000	ug/L	102		70 - 130		
1,4-Dichlorobenzene	B060237-BS1	LCS	23.990	25.000	ug/L	96.0		70 - 130		
1,1-Dichloroethane	B060237-BS1	LCS	25.750	25.000	ug/L	103		70 - 130		
1,1-Dichloroethene	B060237-BS1	LCS	25.310	25.000	ug/L	101		70 - 130		
Toluene	B060237-BS1	LCS	22.690	25.000	ug/L	90.8		70 - 130		
Trichloroethene	B060237-BS1	LCS	25.140	25.000	ug/L	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B060237-BS1	LCS	11.560	10.000	ug/L	116		75 - 125		
Toluene-d8 (Surrogate)	B060237-BS1	LCS	10.240	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	B060237-BS1	LCS	10.350	10.000	ug/L	104		80 - 120		

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Reported: 11/12/2019 8:57  
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Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060237</b>		Used client sample: Y - Description: MW-4-4, 10/21/2019 08:10								
Benzene	MS	1935983-03	ND	24.510	25.000	ug/L		98.0		70 - 130
	MSD	1935983-03	ND	23.220	25.000	ug/L	5.4	92.9	20	70 - 130
Bromodichloromethane	MS	1935983-03	ND	29.060	25.000	ug/L		116		70 - 130
	MSD	1935983-03	ND	26.820	25.000	ug/L	8.0	107	20	70 - 130
Chlorobenzene	MS	1935983-03	ND	24.210	25.000	ug/L		96.8		70 - 130
	MSD	1935983-03	ND	23.240	25.000	ug/L	4.1	93.0	20	70 - 130
Chloroethane	MS	1935983-03	ND	26.170	25.000	ug/L		105		70 - 130
	MSD	1935983-03	ND	24.610	25.000	ug/L	6.1	98.4	20	70 - 130
1,4-Dichlorobenzene	MS	1935983-03	ND	24.100	25.000	ug/L		96.4		70 - 130
	MSD	1935983-03	ND	24.050	25.000	ug/L	0.2	96.2	20	70 - 130
1,1-Dichloroethane	MS	1935983-03	ND	27.270	25.000	ug/L		109		70 - 130
	MSD	1935983-03	ND	25.840	25.000	ug/L	5.4	103	20	70 - 130
1,1-Dichloroethene	MS	1935983-03	ND	26.540	25.000	ug/L		106		70 - 130
	MSD	1935983-03	ND	25.490	25.000	ug/L	4.0	102	20	70 - 130
Toluene	MS	1935983-03	ND	22.730	25.000	ug/L		90.9		70 - 130
	MSD	1935983-03	ND	22.180	25.000	ug/L	2.4	88.7	20	70 - 130
Trichloroethene	MS	1935983-03	0.56000	26.120	25.000	ug/L		102		70 - 130
	MSD	1935983-03	0.56000	24.090	25.000	ug/L	8.1	94.1	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1935983-03	ND	11.200	10.000	ug/L		112		75 - 125
	MSD	1935983-03	ND	11.230	10.000	ug/L	0.3	112		75 - 125
Toluene-d8 (Surrogate)	MS	1935983-03	ND	9.9300	10.000	ug/L		99.3		80 - 120
	MSD	1935983-03	ND	10.170	10.000	ug/L	2.4	102		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1935983-03	ND	10.430	10.000	ug/L		104		80 - 120
	MSD	1935983-03	ND	10.400	10.000	ug/L	0.3	104		80 - 120

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**Reported:** 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2) TICs

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060237</b>						
Chloroacetonitrile	B060237-BLK1	0	ug/L			
1-Chlorobutane	B060237-BLK1	0	ug/L			
1,1-Dichloropropanone	B060237-BLK1	0	ug/L			
Methyl acrylate	B060237-BLK1	0	ug/L			
Nitrobenzene	B060237-BLK1	0	ug/L			
2-Nitropropane	B060237-BLK1	0	ug/L			

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**Reported:** 11/12/2019 8:57  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B061722</b>						
Perchlorate	B061722-BLK1	ND	ug/L	4.0	0.76	

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**Reported:** 11/12/2019 8:57  
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Project Number: 4Q19  
Project Manager: David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B061722</b>										
Perchlorate	B061722-BS1	LCS	9.7155	10.000	ug/L	97.2		85	115	

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**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Source Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B061722</b>		Used client sample: Y - Description: MW-4-5, 10/21/2019 07:35								
Perchlorate	DUP	935983-02RE'	ND	ND		ug/L			15	
	MS	935983-02RE'	ND	8.6021	10.101	ug/L		85.2		80 - 120
	MSD	935983-02RE'	ND	8.6687	10.101	ug/L	0.8	85.8	15	80 - 120

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**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060279</b>						
Hexavalent Chromium	B060279-BLK1	ND	mg/L	0.00020	0.000032	
<b>QC Batch ID: B060280</b>						
Hexavalent Chromium	B060280-BLK1	0.000033000	mg/L	0.00020	0.000032	J
<b>QC Batch ID: B060353</b>						
Total Recoverable Chromium	B060353-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B060354</b>						
Total Recoverable Chromium	B060354-BLK1	ND	ug/L	3.0	0.50	

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### Metals Analysis

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060279</b>										
Hexavalent Chromium	B060279-BS1	LCS	0.020061	0.020000	mg/L	100		90 - 110		
<b>QC Batch ID: B060280</b>										
Hexavalent Chromium	B060280-BS1	LCS	0.020699	0.020000	mg/L	103		90 - 110		
<b>QC Batch ID: B060353</b>										
Total Recoverable Chromium	B060353-BS1	LCS	43.451	40.000	ug/L	109		85 - 115		
<b>QC Batch ID: B060354</b>										
Total Recoverable Chromium	B060354-BS1	LCS	40.237	40.000	ug/L	101		85 - 115		

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B060279</b>		Used client sample: Y - Description: MW-4-5, 10/21/2019 07:35								
Hexavalent Chromium	DUP	1935983-02	ND	ND		mg/L			10	
	MS	1935983-02	ND	0.020420	0.020202	mg/L		101		90 - 110
	MSD	1935983-02	ND	0.020389	0.020202	mg/L	0.2	101	10	90 - 110
<b>QC Batch ID: B060280</b>		Used client sample: Y - Description: SB-2-102119, 10/21/2019 13:35								
Hexavalent Chromium	DUP	1935983-12	0.000042000	0.000037000		mg/L	12.7		10	J,A02
	MS	1935983-12	0.000042000	0.020590	0.020202	mg/L		102		90 - 110
	MSD	1935983-12	0.000042000	0.020359	0.020202	mg/L	1.1	101	10	90 - 110
<b>QC Batch ID: B060353</b>		Used client sample: Y - Description: MW-4-5, 10/21/2019 07:35								
Total Recoverable Chromium	DUP	1935983-02	9.4840	8.2120		ug/L	14.4		20	
	MS	1935983-02	9.4840	47.828	40.000	ug/L		95.9		70 - 130
	MSD	1935983-02	9.4840	47.362	40.000	ug/L	1.0	94.7	20	70 - 130
<b>QC Batch ID: B060354</b>		Used client sample: N								
Total Recoverable Chromium	DUP	1936125-02	ND	ND		ug/L			20	
	MS	1936125-02	ND	28.641	40.000	ug/L		71.6		70 - 130
	MSD	1936125-02	ND	30.710	40.000	ug/L	7.0	76.8	20	70 - 130

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:57  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- V11 The Continuing Calibration Verification (CCV) recovery was not within established control limits.





Date of Report: 11/12/2019

David Conner

Tidewater Inc.

3761 Attucks Drive  
Powell, OH 43065

Client Project: 4Q19  
BCL Project: JPL- GW Monitoring Wells  
BCL Work Order: 1936104  
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/22/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Chain of Custody Form

Page 1 of 2

**Report To:** Tidewater, Inc.  
**Client:** David Conner  
**Street Address:** 3781 Allucks Drive  
**City:** Powell  
**State:** OH  
**Zip:** 43065  
**Phone:** 626 | 298 - 5715  
**Fax:** 614 | 792 - 2897  
**Email Address:** david.conner@tidwh20.net  
**Submission #:** 19-36104

**Project Description:** JPL-GW Monitoring  
**Project Code:** 4Q19  
**Sampler (s):** Elaine Tech

**Billing:**  
**Client:** Tidewater  
**Attn:** David Conner  
**Address:** 3781 Allucks Drive  
**City:** Powell  
**State:** OH  
**Zip:** 43065  
**Are there any tests with holding times less than or equal to 48 hours?**  
 Yes  NO  
 \*Standard Turnaround = 10

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRAC Cr	Perchlorate	Hexavalent Cr 6-216.6 (mg/L)	Cl, NO3, NO2, SO4	Orthophosphate 365.1
-1	TB-7-102219	10/22/19	0700	GW	X	X	X	X	X	X
-2	MW-11-5	0900		W	X	X	X	X	X	X
-3	MW-11-1	0800		W	X	X	X	X	X	X
-4	MW-11-4	0940		W	X	X	X	X	X	X
-5	MW-11-3	1015		W	X	X	X	X	X	X
-6	MW-11-2	1100		W	X	X	X	X	X	X
-7	MW-21-5	1245		W	X	X	X	X	X	X
-8	MW-21-4	1320		W	X	X	X	X	X	X
-9	XP-5-4Q19	1330		W	X	X	X	X	X	X
-10	MW-21-3	1410		W	X	X	X	X	X	X
-11	MW-21-2	1405		W	X	X	X	X	X	X

**Notes:**  
 CR BY: DISTRIBUTION  
 GS JL MA MS  
 SUB OUT  
 MS MSD & LON, 4  
 SHORT HOLDING TIME  
 CR NO3 NO2 OP SS  
 DO Cl2 BOD MBAS COI

**Matrix Types:** S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other

**Turnaround # of working days:**  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)

**Lab TAT Approval:** \_\_\_\_\_ \*Additional Charges May Apply

**Comments:**  
 PLEASE NOTATE WHICH SAMPLES TO USE FOR OC (MS/MSD) 90% Level III and 10% Level IV data validation required; Level IV Notated on C of C  
 NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)

**Cost Center:**  
 1. Requisitioned By: \_\_\_\_\_ Date: 10/22/19 Time: 1535  
 2. Requisitioned By: \_\_\_\_\_ Date: 10-22-19 Time: 1750  
 3. Requisitioned By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**Global ID:** \_\_\_\_\_  
 1. Requisitioned By: \_\_\_\_\_ Date: 10-22-19 Time: 1535  
 2. Requisitioned By: \_\_\_\_\_ Date: 10-22-19 Time: 1750  
 3. Requisitioned By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327 - 4911 Fax: (661) 327 - 1918 www.bclabs.com

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Page 2 of 2

Chain of Custody Form



**Report To:** Tidewater, Inc.  
**Client:** Tidewater  
**Attn:** David Corner  
**Street Address:** 3781 Allucks Drive  
**City:** Powell **State:** OH **Zip:** 43065  
**Phone:** 626 ) 298 - 5715 **Fax:** 614 ) 792 - 2897  
**Email Address:** david.corner@tidet2o.net  
**Submission #:** 19-36104

**Project Description:** JPL-GW Monitoring  
**Project Code:** 4C19  
**Sampler (s):** Blaine Tech

**Sample #** **Sample Description** **Date** **Time** **Matrix\***  
 -12 EB-7-102219 10/22/19 1340 W  
 Orthophosphate 365.1  
 CI, NO3, NO2, SO4  
 Hexavalent Cr6 -218.6 (mg/L)  
 Perchlorate  
 TRM: Cr  
 VOCs EPA 524.2

**Analysis Requested**

**Billing**  
**Client:** Tidewater  
**Attn:** David Corner  
**Address:** 3781 Allucks Drive  
**City:** Powell **State:** OH **Zip:** 43065  
 Are there any tests with holding times? less than or equal to 48 hours?  
 Yes  NO  
 \*Standard Turnaround = 10

**Notes**

**Matrix Types:** S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other

**Turnaround # of working days:**  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)

**Lab TAT Approval:** \*Additional Charges May Apply

**Comments:**  
 PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MS/MSD)  
 90% Level III and 10% Level IV data validation required; Level IV Notated on C of C  
 NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)

**Cost Center:**  
 1. Relinquished By: [Signature] Date: 10/22/19 Time: 1535  
 2. Relinquished By: [Signature] Date: 10-22-19 Time: 1750  
 3. Relinquished By: [Signature] Date: 10-22-19 Time: 1750

**Global ID#**

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327 - 4911 Fax: (661) 327 - 1918 www.bclabs.com

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# Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 2

Submission #: 19-36104

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received:  YES  NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10-22-19 19:31

Temperature: (A) 2.6 °C / (C) 2.0 °C Analyst Init: Emm

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES		E	E	E	E	E	E	E	E	E
4oz / 8oz / 16oz PE UNPRES			F							
2oz Cr <sup>6+</sup>		D	D	D	D	GH	D	D	D	D
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		F	G	F	F	KV	F	F	F	F
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL	ABC	ABC	ABC	ABC	ABC	AZF	ABX	ABC	ABC	
QT EPA 1664	GA									
PT ODOR	opz									
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8050										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 54E										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_ Date/Time: 10-22-19 19:31 Rev 21 05/23/2016

Sample Numbering Completed By: Emm / CAJ

A = Actual / C = Corrected



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 2

Submission #: 1936104

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received:  YES  NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10-22-19 19:31

Temperature: (A) 1.9 °C / (C) 1.3 °C Analyst Init: Emm

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	(10)	(11)	(12)	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/503/503										
QT EPA 515.1/5150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBR										
8oz / 16oz / 32oz IAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: Emm / GSR Date/Time: 10-22-19 19:31 Rev 21 05/23/2016

A = Actual / C = Corrected

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1936104-01</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> TB-7-102219 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 07:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-7-102219 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1936104-02</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-11-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 09:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-11-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1936104-03</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-11-1 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 08:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-11-1 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1936104-04</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-11-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 09:40 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-11-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1936104-05</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-11-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 10:15 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-11-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1936104-06</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-11-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 11:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-11-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1936104-07</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-21-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 12:45 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-21-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1936104-08</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-21-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 13:20 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-21-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936104-09</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> DUP-5-4Q19 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 13:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-5-4Q19 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1936104-10</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-21-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 14:10 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-21-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936104-11</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-21-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 14:35 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-21-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936104-12</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> EB-7-102219 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/22/2019 17:50 <b>Sampling Date:</b> 10/22/2019 13:40 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-7-102219 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-01	<b>Client Sample Name:</b> NASA/JPL, TB-7-102219, 10/22/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-01	<b>Client Sample Name:</b> NASA/JPL, TB-7-102219, 10/22/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-01	<b>Client Sample Name:</b> NASA/JPL, TB-7-102219, 10/22/2019 7:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 11:58	MGC	MS-V5	1	B060443

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-01	<b>Client Sample Name:</b> NASA/JPL, TB-7-102219, 10/22/2019 7:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 11:58	MGC	MS-V5	1	B060443

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2019 9:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q19
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1936104-02) and Client Sample Name (NASA/JPL, MW-11-5, 10/22/2019 9:00:00AM, Blaine Tech)

Main data table with columns: Constituent, Result, Units, PQL, MDL, Method, MB Bias, Lab Quals, Run #. Lists various organic compounds and their detection results.

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Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936104-02 Client Sample Name: NASA/JPL, MW-11-5, 10/22/2019 9:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-02	<b>Client Sample Name:</b> NASA/JPL, MW-11-5, 10/22/2019 9:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 12:22	MGC	MS-V5	1	B060443

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-02	<b>Client Sample Name:</b> NASA/JPL, MW-11-5, 10/22/2019 9:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 12:22	MGC	MS-V5	1	B060443

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Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936104-02	<b>Client Sample Name:</b> NASA/JPL, MW-11-5, 10/22/2019 9:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/09/19 05:35	MRC	IC6	1	B061764

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936104-02	<b>Client Sample Name:</b> NASA/JPL, MW-11-5, 10/22/2019 9:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00013	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
<b>Total Recoverable Chromium</b>	<b>1.2</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/24/19 09:00	10/24/19 10:44	MRC	IC-4	1	B060391
2	EPA-200.8	10/25/19 09:05	10/25/19 15:59	AS1	PE-EL2	1	B060459

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1936104-03      **Client Sample Name:** NASA/JPL, MW-11-1, 10/22/2019 8:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 9:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q19
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1936104-03) and Client Sample Name (NASA/JPL, MW-11-1, 10/22/2019 8:00:00AM, Blaine Tech)

Main data table with 9 columns: Constituent, Result, Units, PQL, MDL, Method, MB Bias, Lab Quals, Run #. Lists various chemical constituents and their analysis results.

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1936104-03      **Client Sample Name:** NASA/JPL, MW-11-1, 10/22/2019 8:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 12:46	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-03	<b>Client Sample Name:</b> NASA/JPL, MW-11-1, 10/22/2019 8:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 12:46	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936104-03	<b>Client Sample Name:</b> NASA/JPL, MW-11-1, 10/22/2019 8:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	25	mg/L	0.50	0.15	EPA-300.0	ND		1
Nitrate as N	1.8	mg/L	0.10	0.042	EPA-300.0	ND		1
Sulfate	46	mg/L	1.0	0.20	EPA-300.0	ND		1
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		2
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		3
ortho-Phosphate as P	0.018	mg/L	0.050	0.017	EPA-365.1	ND	J	4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	10/22/19 23:00	10/23/19 10:41	MRC	IC1	1	B060275
2	EPA-353.2	10/23/19 08:42	10/23/19 08:42	MC1	KONE-1	1	B060366
3	EPA-314.0	11/08/19 22:00	11/09/19 05:51	MRC	IC6	1	B061764
4	EPA-365.1	10/23/19 08:08	10/23/19 08:17	MC1	SC-1	1	B060367

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936104-03	<b>Client Sample Name:</b> NASA/JPL, MW-11-1, 10/22/2019 8:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00010	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
<b>Total Recoverable Chromium</b>	<b>4.5</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>		<b>2</b>

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/24/19 09:00	10/24/19 10:54	MRC	IC-4	1	B060391
2	EPA-200.8	10/25/19 09:05	10/25/19 16:01	AS1	PE-EL2	1	B060459

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Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-04	<b>Client Sample Name:</b> NASA/JPL, MW-11-4, 10/22/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 9:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q19
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1936104-04) and Client Sample Name (NASA/JPL, MW-11-4, 10/22/2019 9:40:00AM, Blaine Tech)

Main data table with 9 columns: Constituent, Result, Units, PQL, MDL, Method, MB Bias, Lab Quals, Run #. Lists various chemical compounds and their analysis results.

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1936104-04      **Client Sample Name:** NASA/JPL, MW-11-4, 10/22/2019 9:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 13:11	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-04	<b>Client Sample Name:</b> NASA/JPL, MW-11-4, 10/22/2019 9:40:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 13:11	MGC	MS-V5	1	B060443

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936104-04	<b>Client Sample Name:</b> NASA/JPL, MW-11-4, 10/22/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/09/19 06:06	MRC	IC6	1	B061764

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936104-04	<b>Client Sample Name:</b> NASA/JPL, MW-11-4, 10/22/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000042	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/24/19 09:00	10/24/19 11:03		MRC	IC-4	1	B060391
2	EPA-200.8	10/25/19 09:05	10/25/19 16:02		AS1	PE-EL2	1	B060459

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Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-05	<b>Client Sample Name:</b> NASA/JPL, MW-11-3, 10/22/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936104-05		Client Sample Name: NASA/JPL, MW-11-3, 10/22/2019 10:15:00AM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Methyl t-butyl ether</b>	<b>0.30</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
<b>Styrene</b>	<b>0.38</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.12</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
<b>Carbon disulfide</b>	<b>0.51</b>	<b>ug/L</b>	<b>1.0</b>	<b>0.48</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-05	<b>Client Sample Name:</b> NASA/JPL, MW-11-3, 10/22/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 13:35	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
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**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-05	<b>Client Sample Name:</b> NASA/JPL, MW-11-3, 10/22/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 13:35	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936104-05	<b>Client Sample Name:</b> NASA/JPL, MW-11-3, 10/22/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/09/19 06:21	MRC	IC6	1	B061764

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936104-05	<b>Client Sample Name:</b> NASA/JPL, MW-11-3, 10/22/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>1.3</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	ND	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-218.6	10/24/19 09:00	10/24/19 11:13	MRC	IC-4	1	B060391
2	EPA-200.8	10/25/19 09:05	10/25/19 16:04	AS1	PE-EL2	1	B060459

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Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-06	<b>Client Sample Name:</b> NASA/JPL, MW-11-2, 10/22/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-06	<b>Client Sample Name:</b> NASA/JPL, MW-11-2, 10/22/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-06	<b>Client Sample Name:</b> NASA/JPL, MW-11-2, 10/22/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 08:45	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-06	<b>Client Sample Name:</b> NASA/JPL, MW-11-2, 10/22/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 08:45	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936104-06	<b>Client Sample Name:</b> NASA/JPL, MW-11-2, 10/22/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/09/19 04:34	MRC	IC6	1	B061764

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936104-06	<b>Client Sample Name:</b> NASA/JPL, MW-11-2, 10/22/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/24/19 09:00	10/24/19 10:06		MRC	IC-4	1	B060391
2	EPA-200.8	10/25/19 09:05	10/25/19 15:44		AS1	PE-EL2	1	B060459

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Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936104-07 Client Sample Name: NASA/JPL, MW-21-5, 10/22/2019 12:45:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>5.4</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-07	<b>Client Sample Name:</b> NASA/JPL, MW-21-5, 10/22/2019 12:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.68</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1936104-07      **Client Sample Name:** NASA/JPL, MW-21-5, 10/22/2019 12:45:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	119	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 13:59	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-07	<b>Client Sample Name:</b> NASA/JPL, MW-21-5, 10/22/2019 12:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 13:59	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936104-07	<b>Client Sample Name:</b> NASA/JPL, MW-21-5, 10/22/2019 12:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.1	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/09/19 07:07	MRC	IC6	1	B061764

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936104-07	<b>Client Sample Name:</b> NASA/JPL, MW-21-5, 10/22/2019 12:45:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0011	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	1.0	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/24/19 09:00	10/24/19 11:42		MRC	IC-4	1	B060391
2	EPA-200.8	10/25/19 09:05	10/25/19 16:06		AS1	PE-EL2	1	B060459

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Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-08	<b>Client Sample Name:</b> NASA/JPL, MW-21-4, 10/22/2019 1:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>5.3</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
<b>1,1-Dichloroethane</b>	<b>0.20</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.15</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
<b>cis-1,2-Dichloroethene</b>	<b>0.32</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.27</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936104-08		Client Sample Name: NASA/JPL, MW-21-4, 10/22/2019 1:20:00PM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>2.9</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.99</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1936104-08      **Client Sample Name:** NASA/JPL, MW-21-4, 10/22/2019 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	117	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 14:23	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-08	<b>Client Sample Name:</b> NASA/JPL, MW-21-4, 10/22/2019 1:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 14:23	MGC	MS-V5	1	B060443

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Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936104-08	<b>Client Sample Name:</b> NASA/JPL, MW-21-4, 10/22/2019 1:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.7	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/09/19 07:23	MRC	IC6	1	B061764

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936104-08	<b>Client Sample Name:</b> NASA/JPL, MW-21-4, 10/22/2019 1:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0012	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>1.2</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/24/19 09:00	10/24/19 11:51		MRC	IC-4	1	B060391
2	EPA-200.8	10/25/19 09:05	10/25/19 16:08		AS1	PE-EL2	1	B060459

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Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-09	<b>Client Sample Name:</b> NASA/JPL, DUP-5-4Q19, 10/22/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>6.1</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
<b>1,1-Dichloroethane</b>	<b>0.19</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.15</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
<b>cis-1,2-Dichloroethene</b>	<b>0.47</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.27</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-09	<b>Client Sample Name:</b> NASA/JPL, DUP-5-4Q19, 10/22/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>3.0</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>1.0</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-09	<b>Client Sample Name:</b> NASA/JPL, DUP-5-4Q19, 10/22/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	117	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 14:48	MGC	MS-V5	1	B060443

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-09	<b>Client Sample Name:</b> NASA/JPL, DUP-5-4Q19, 10/22/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 14:48	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936104-09	<b>Client Sample Name:</b> NASA/JPL, DUP-5-4Q19, 10/22/2019 1:30:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.7	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/09/19 07:38	MRC	IC6	1	B061764

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936104-09	<b>Client Sample Name:</b> NASA/JPL, DUP-5-4Q19, 10/22/2019 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0012	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	1.2	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/24/19 09:00	10/24/19 12:01	MRC	IC-4	1	B060391
2	EPA-200.8	10/25/19 09:05	10/25/19 16:09	AS1	PE-EL2	1	B060459

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Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-10	<b>Client Sample Name:</b> NASA/JPL, MW-21-3, 10/22/2019 2:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.40</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936104-10 Client Sample Name: NASA/JPL, MW-21-3, 10/22/2019 2:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.57</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>0.68</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-10	<b>Client Sample Name:</b> NASA/JPL, MW-21-3, 10/22/2019 2:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	117	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 15:12	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-10	<b>Client Sample Name:</b> NASA/JPL, MW-21-3, 10/22/2019 2:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 15:12	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936104-10	<b>Client Sample Name:</b> NASA/JPL, MW-21-3, 10/22/2019 2:10:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.7	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/09/19 07:53	MRC	IC6	1	B061764

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936104-10	<b>Client Sample Name:</b> NASA/JPL, MW-21-3, 10/22/2019 2:10:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00014	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/24/19 09:00	10/24/19 12:10	MRC	IC-4	1	B060391
2	EPA-200.8	10/25/19 09:05	10/25/19 16:11	AS1	PE-EL2	1	B060459

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Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936104-11 Client Sample Name: NASA/JPL, MW-21-2, 10/22/2019 2:35:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.20</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936104-11		Client Sample Name: NASA/JPL, MW-21-2, 10/22/2019 2:35:00PM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.43</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-11	<b>Client Sample Name:</b> NASA/JPL, MW-21-2, 10/22/2019 2:35:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	120	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 15:36	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-11	<b>Client Sample Name:</b> NASA/JPL, MW-21-2, 10/22/2019 2:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 15:36	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936104-11	<b>Client Sample Name:</b> NASA/JPL, MW-21-2, 10/22/2019 2:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.8	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/09/19 08:09	MRC	IC6	1	B061764

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936104-11	<b>Client Sample Name:</b> NASA/JPL, MW-21-2, 10/22/2019 2:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/24/19 09:00	10/24/19 12:20		MRC	IC-4	1	B060391
2	EPA-200.8	10/25/19 09:05	10/25/19 16:13		AS1	PE-EL2	1	B060459

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Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936104-12 Client Sample Name: NASA/JPL, EB-7-102219, 10/22/2019 1:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-12	<b>Client Sample Name:</b> NASA/JPL, EB-7-102219, 10/22/2019 1:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936104-12	<b>Client Sample Name:</b> NASA/JPL, EB-7-102219, 10/22/2019 1:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 16:00	MGC	MS-V5	1	B060443

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Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936104-12	<b>Client Sample Name:</b> NASA/JPL, EB-7-102219, 10/22/2019 1:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/25/19 07:00	10/25/19 16:00	MGC	MS-V5	1	B060443

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936104-12	<b>Client Sample Name:</b> NASA/JPL, EB-7-102219, 10/22/2019 1:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/09/19 08:24	MRC	IC6	1	B061764

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936104-12	<b>Client Sample Name:</b> NASA/JPL, EB-7-102219, 10/22/2019 1:40:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000052	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/24/19 09:00	10/24/19 12:49		MRC	IC-4	1	B060392
2	EPA-200.8	10/25/19 09:05	10/25/19 14:46		AS1	PE-EL2	1	B060458

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**Reported:** 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060443</b>						
Benzene	B060443-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B060443-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B060443-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B060443-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B060443-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B060443-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B060443-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B060443-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B060443-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B060443-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B060443-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B060443-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B060443-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B060443-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B060443-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B060443-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B060443-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B060443-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B060443-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B060443-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B060443-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B060443-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B060443-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B060443-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B060443-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B060443-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B060443-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B060443-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B060443-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B060443-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B060443-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B060443-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B060443-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B060443-BLK1	ND	ug/L	0.50	0.14	

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Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060443</b>						
trans-1,3-Dichloropropene	B060443-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B060443-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B060443-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B060443-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B060443-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B060443-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B060443-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B060443-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B060443-BLK1	ND	ug/L	0.50	0.12	
Styrene	B060443-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B060443-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B060443-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B060443-BLK1	ND	ug/L	0.50	0.23	
Toluene	B060443-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B060443-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B060443-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B060443-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B060443-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B060443-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B060443-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B060443-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B060443-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B060443-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B060443-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B060443-BLK1	ND	ug/L	0.50	0.18	
Acetone	B060443-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B060443-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B060443-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B060443-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B060443-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B060443-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B060443-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B060443-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B060443-BLK1	ND	ug/L	4.0	1.3	

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060443</b>						
Ethyl t-butyl ether	B060443-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B060443-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B060443-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B060443-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B060443-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B060443-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B060443-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B060443-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B060443-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B060443-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B060443-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B060443-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B060443-BLK1	ND	ug/L	0.50	0.13	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>B060443-BLK1</b>	<b>107</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>B060443-BLK1</b>	<b>102</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>B060443-BLK1</b>	<b>101</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

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Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060443</b>										
Benzene	B060443-BS1	LCS	22.840	25.000	ug/L	91.4		70 - 130		
Bromodichloromethane	B060443-BS1	LCS	27.280	25.000	ug/L	109		70 - 130		
Chlorobenzene	B060443-BS1	LCS	24.020	25.000	ug/L	96.1		70 - 130		
Chloroethane	B060443-BS1	LCS	27.070	25.000	ug/L	108		70 - 130		
1,4-Dichlorobenzene	B060443-BS1	LCS	22.740	25.000	ug/L	91.0		70 - 130		
1,1-Dichloroethane	B060443-BS1	LCS	25.930	25.000	ug/L	104		70 - 130		
1,1-Dichloroethene	B060443-BS1	LCS	25.870	25.000	ug/L	103		70 - 130		
Toluene	B060443-BS1	LCS	22.070	25.000	ug/L	88.3		70 - 130		
Trichloroethene	B060443-BS1	LCS	25.040	25.000	ug/L	100		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B060443-BS1	LCS	10.970	10.000	ug/L	110		75 - 125		
Toluene-d8 (Surrogate)	B060443-BS1	LCS	10.040	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	B060443-BS1	LCS	10.690	10.000	ug/L	107		80 - 120		

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Powell, OH 43065

Reported: 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060443</b>		Used client sample: Y - Description: MW-11-2, 10/22/2019 11:00								
Benzene	MS	1936104-06	ND	23.740	25.000	ug/L		95.0		70 - 130
	MSD	1936104-06	ND	24.230	25.000	ug/L	2.0	96.9	20	70 - 130
Bromodichloromethane	MS	1936104-06	ND	28.410	25.000	ug/L		114		70 - 130
	MSD	1936104-06	ND	28.440	25.000	ug/L	0.1	114	20	70 - 130
Chlorobenzene	MS	1936104-06	ND	24.640	25.000	ug/L		98.6		70 - 130
	MSD	1936104-06	ND	22.690	25.000	ug/L	8.2	90.8	20	70 - 130
Chloroethane	MS	1936104-06	ND	26.650	25.000	ug/L		107		70 - 130
	MSD	1936104-06	ND	26.200	25.000	ug/L	1.7	105	20	70 - 130
1,4-Dichlorobenzene	MS	1936104-06	ND	25.320	25.000	ug/L		101		70 - 130
	MSD	1936104-06	ND	22.220	25.000	ug/L	13.0	88.9	20	70 - 130
1,1-Dichloroethane	MS	1936104-06	ND	26.890	25.000	ug/L		108		70 - 130
	MSD	1936104-06	ND	26.960	25.000	ug/L	0.3	108	20	70 - 130
1,1-Dichloroethene	MS	1936104-06	ND	26.260	25.000	ug/L		105		70 - 130
	MSD	1936104-06	ND	26.230	25.000	ug/L	0.1	105	20	70 - 130
Toluene	MS	1936104-06	ND	23.070	25.000	ug/L		92.3		70 - 130
	MSD	1936104-06	ND	22.290	25.000	ug/L	3.4	89.2	20	70 - 130
Trichloroethene	MS	1936104-06	ND	25.170	25.000	ug/L		101		70 - 130
	MSD	1936104-06	ND	25.340	25.000	ug/L	0.7	101	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1936104-06	ND	10.870	10.000	ug/L		109		75 - 125
	MSD	1936104-06	ND	11.100	10.000	ug/L	2.1	111		75 - 125
Toluene-d8 (Surrogate)	MS	1936104-06	ND	10.030	10.000	ug/L		100		80 - 120
	MSD	1936104-06	ND	10.030	10.000	ug/L	0	100		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1936104-06	ND	10.440	10.000	ug/L		104		80 - 120
	MSD	1936104-06	ND	9.6900	10.000	ug/L	7.5	96.9		80 - 120

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**Reported:** 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2) TICs

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060443</b>						
Chloroacetonitrile	B060443-BLK1	0	ug/L			
1-Chlorobutane	B060443-BLK1	0	ug/L			
1,1-Dichloropropanone	B060443-BLK1	0	ug/L			
Methyl acrylate	B060443-BLK1	0	ug/L			
Nitrobenzene	B060443-BLK1	0	ug/L			
2-Nitropropane	B060443-BLK1	0	ug/L			

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060275</b>						
Chloride	B060275-BLK1	ND	mg/L	0.50	0.15	
Nitrate as N	B060275-BLK1	ND	mg/L	0.10	0.042	
Sulfate	B060275-BLK1	ND	mg/L	1.0	0.20	
<b>QC Batch ID: B060366</b>						
Nitrite as N	B060366-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B060367</b>						
ortho-Phosphate as P	B060367-BLK1	ND	mg/L	0.050	0.017	
<b>QC Batch ID: B061764</b>						
Perchlorate	B061764-BLK1	ND	ug/L	4.0	0.76	

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Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060275</b>										
Chloride	B060275-BS1	LCS	48.326	50.000	mg/L	96.7		90 - 110		
Nitrate as N	B060275-BS1	LCS	4.9610	5.0000	mg/L	99.2		90 - 110		
Sulfate	B060275-BS1	LCS	95.411	100.00	mg/L	95.4		90 - 110		
<b>QC Batch ID: B060366</b>										
Nitrite as N	B060366-BS1	LCS	0.50233	0.50000	mg/L	100		90 - 110		
<b>QC Batch ID: B060367</b>										
ortho-Phosphate as P	B060367-BS1	LCS	0.50970	0.50000	mg/L	102		90 - 110		
<b>QC Batch ID: B061764</b>										
Perchlorate	B061764-BS1	LCS	10.720	10.000	ug/L	107		85 - 115		

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Project Number: 4Q19  
Project Manager: David Conner

### Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B060275</b>		Used client sample: N								
Chloride	DUP	1936128-02	12.116	11.920		mg/L	1.6		10	
	MS	1936128-02	12.116	64.215	50.505	mg/L		103		80 - 120
	MSD	1936128-02	12.116	64.503	50.505	mg/L	0.4	104	10	80 - 120
Nitrate as N	DUP	1936128-02	0.63800	0.64900		mg/L	1.7		10	
	MS	1936128-02	0.63800	5.8960	5.0505	mg/L		104		80 - 120
	MSD	1936128-02	0.63800	5.8616	5.0505	mg/L	0.6	103	10	80 - 120
Sulfate	DUP	1936128-02	16.951	16.708		mg/L	1.4		10	
	MS	1936128-02	16.951	118.18	101.01	mg/L		100		80 - 120
	MSD	1936128-02	16.951	118.19	101.01	mg/L	0.0	100	10	80 - 120
<b>QC Batch ID: B060366</b>		Used client sample: Y - Description: MW-11-1, 10/22/2019 08:00								
Nitrite as N	DUP	1936104-03	ND	ND		mg/L			10	
	MS	1936104-03	ND	0.54462	0.52632	mg/L		103		90 - 110
	MSD	1936104-03	ND	0.54043	0.52632	mg/L	0.8	103	10	90 - 110
<b>QC Batch ID: B060367</b>		Used client sample: Y - Description: MW-11-1, 10/22/2019 08:00								
ortho-Phosphate as P	DUP	1936104-03	0.017900	0.019000		mg/L	6.0		10	J
	MS	1936104-03	0.017900	0.57232	0.52632	mg/L		105		90 - 110
	MSD	1936104-03	0.017900	0.57632	0.52632	mg/L	0.7	106	10	90 - 110
<b>QC Batch ID: B061764</b>		Used client sample: Y - Description: MW-11-2, 10/22/2019 11:00								
Perchlorate	DUP	1936104-06	ND	ND		ug/L			15	
	MS	1936104-06	ND	8.9119	10.101	ug/L		88.2		80 - 120
	MSD	1936104-06	ND	8.6479	10.101	ug/L	3.0	85.6	15	80 - 120

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**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060391</b>						
Hexavalent Chromium	B060391-BLK1	ND	mg/L	0.00020	0.000032	
<b>QC Batch ID: B060392</b>						
Hexavalent Chromium	B060392-BLK1	ND	mg/L	0.00020	0.000032	
<b>QC Batch ID: B060458</b>						
Total Recoverable Chromium	B060458-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B060459</b>						
Total Recoverable Chromium	B060459-BLK1	ND	ug/L	3.0	0.50	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Metals Analysis

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060391</b>										
Hexavalent Chromium	B060391-BS1	LCS	0.020706	0.020000	mg/L	104		90 - 110		
<b>QC Batch ID: B060392</b>										
Hexavalent Chromium	B060392-BS1	LCS	0.020427	0.020000	mg/L	102		90 - 110		
<b>QC Batch ID: B060458</b>										
Total Recoverable Chromium	B060458-BS1	LCS	41.720	40.000	ug/L	104		85 - 115		
<b>QC Batch ID: B060459</b>										
Total Recoverable Chromium	B060459-BS1	LCS	39.975	40.000	ug/L	99.9		85 - 115		

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B060391</b>		Used client sample: Y - Description: MW-11-2, 10/22/2019 11:00								
Hexavalent Chromium	DUP	1936104-06	ND	ND		mg/L			10	
	MS	1936104-06	ND	0.020057	0.020202	mg/L		99.3		90 - 110
	MSD	1936104-06	ND	0.020304	0.020202	mg/L	1.2	101	10	90 - 110
<b>QC Batch ID: B060392</b>		Used client sample: Y - Description: EB-7-102219, 10/22/2019 13:40								
Hexavalent Chromium	DUP	1936104-12	0.000052000	0.000035000		mg/L	39.1		10	J,A02
	MS	1936104-12	0.000052000	0.020243	0.020202	mg/L		99.9		90 - 110
	MSD	1936104-12	0.000052000	0.020397	0.020202	mg/L	0.8	101	10	90 - 110
<b>QC Batch ID: B060458</b>		Used client sample: N								
Total Recoverable Chromium	DUP	1936099-02	2.6500	2.7140		ug/L	2.4		20	J
	MS	1936099-02	2.6500	43.927	40.000	ug/L		103		70 - 130
	MSD	1936099-02	2.6500	44.746	40.000	ug/L	1.8	105	20	70 - 130
<b>QC Batch ID: B060459</b>		Used client sample: Y - Description: MW-11-2, 10/22/2019 11:00								
Total Recoverable Chromium	DUP	1936104-06	ND	ND		ug/L			20	
	MS	1936104-06	ND	38.405	40.000	ug/L		96.0		70 - 130
	MSD	1936104-06	ND	37.295	40.000	ug/L	2.9	93.2	20	70 - 130

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 9:45  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A02 The difference between duplicate readings is less than the quantitation limit.
- V11 The Continuing Calibration Verification (CCV) recovery was not within established control limits.



Date of Report: 11/12/2019

David Conner

Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Client Project: 4Q19  
BCL Project: JPL- GW Monitoring Wells  
BCL Work Order: 1936293  
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/23/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Page 1 of 2

Chain of Custody Form



Report To: Tidewater, Inc. Client: David Conner  
 Address: 3761 Altlucks Drive City: Powell State: OH Zip: 43065  
 Phone: 626 1288 - 5715 Fax: 614 792 - 2897  
 Email: david.conner@tidet2b.net

Project Description: JPL-GW Monitoring  
 Project Code: 4019  
 Sampler(s): Blaine Tech

Analysis Requested:  
 VOCs EPA 524.2  
 TRM: C  
 Perchlorate  
 Hexavalent Cr6 -218.6 (mg/L)  
 Cl, NO3, NO2, SO4  
 Orthophosphate 365.1

Sample #	Sample Description	Date	Time	Matrix*
-1	TD-8-102319	10/23/19	0700	W
-2	MW-18-5		0825	W
-3	MW-18-4		0910	W
-4	MW-18-3		0940	W
-5	MW-18-2		1005	W
-6	DUP-7-4019		1015	W
-7	EB-8-102319		1100	W

Notes:  
 SHORT HOLDING TIME  
 DO CL ROD MBAS COT  
 CHECK BY DISTRIBUTION  
 WAXING  
 SUB OUT

Matrix Types: S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other  
 Turnaround # of working days: 24 Hr Rush 48 Hr Rush 3-5 Day Rush 3-5 Day Rush Normal (10 - Days)  
 Lab TAT Approval: Additional Charges May Apply

Comments:  
 PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MS/MSD)  
 90% Level III and 10% Level IV data validation required: Level IV Notated on C of C  
 NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)

Global ID:  
 1. Relinquished By: [Signature] Date: 10/23/19 Time: 1500  
 2. Relinquished By: [Signature] Date: 10/23/19 Time: 1945  
 3. Relinquished By: [Signature] Date: 10/23/19 Time: 1945

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327 - 4911 Fax: (661) 327 - 1918 www.bclabs.com

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Chain of Custody Form



19-36293

Page 2 of 2

Required Fields

Report To: Tidewater, Inc.  
 Client: David Connor  
 Address: 3761 Allucks Drive  
 City: Powell State: OH Zip: 43065  
 Phone: 626 298-5715 Fax: 614 792-2897  
 Email Address: david.connor@delh2o.net  
 Submission #: \_\_\_\_\_

Project Description: JPL-GW Monitoring  
 Project Code: 4Q19  
 Sampler (s): Blaine Tech

Billing: Client: Tidewater  
 Attn: David Connor  
 Address: 3761 Allucks Drive  
 City: Powell State: OH Zip: 43065  
 Are there any tests with holding times less than or equal to 48 hours?  
 Yes  No  
 \*Standard Turnaround = 10

Sample #	Sample Description	Date	Time	Matrix*
-8	MW-6	10-23-19	0730	W
-9	MW-10		0825	W
-10	MW-5		0910	W
-11	DUP-6-4(10)		0915	W
-12	MW-15		1010	W
-13	MW-6		1130	W
-14	DUP-7-4(19)		1135	W
-15	MW-7		1230	W

Analysis Requested

Sample #	VOCs EPA 524.2	TRM: C	Perchlorate	Hexavalent Cr (mg/L)	Cl, NO3, NO2, SO4	Orthophosphate 365.1
-8	X	X	X	X		
-9	X	X	X	X		
-10	X	X	X	X		
-11	X	X	X	X		
-12	X	X	X	X		
-13	X	X	X	X		
-14	X	X	X	X		
-15	X	X	X	X		

Notes: MSMSD 1V14  
 MSMSD 1V14

Matrix Types: S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other

Turnaround # of working days:  24 Hr Rush  48 Hr Rush  3-5 Day Rush  Normal (10 - Days)

Lab TAT Approval: \_\_\_\_\_ \*Additional Charges May Apply

Comments: PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MSMSD) 90% Level III and 10% Level IV data validation required: Level IV Notated on C of C NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)

Cost Center: Global ID: \_\_\_\_\_  
 1. Requisitioned By: \_\_\_\_\_ Date: 10-23-19 Time: 1500  
 2. Requisitioned By: \_\_\_\_\_ Date: 10-23-19 Time: 1945  
 3. Requisitioned By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 2

Submission #: 19-36293

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.98 Container: VOA Thermometer ID: 208 Date/Time: 10/23/19 Analyst Init: EJR

Temperature: (A) 0.4 °C / (C) \_\_\_\_\_ °C

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	7	8	9	10	11	12	13
QT PE UNPRES		E	E	E	E	E	E			
4oz / 8oz / 16oz PE UNPRES										
2oz Cr <sup>6+</sup>		D	D	D	D	D	D			
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz (16oz)		F	F	F	F	F	F			
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK 094 A		ABC	ABC	ABC	ABC	ABC	ABC			
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/508/5080										
QT EPA 515.1/5150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 545										
QT EPA 543										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz IAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_ Date/Time: 10-23-19 21:03

Sample Numbering Completed By: EJM Rev 21 05/23/2016



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 2

Submission #: 19-36293

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received: YES  NO  Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 10/23/19

Temperature: (A) 1.4 °C / (C) 0.8 °C Analyst Init: SK

SAMPLE CONTAINERS	SAMPLE NUMBERS													
	4	5	6	7	8	9	10	11	12	13	14	15	9	10
QT PE UNPRES	E	E	GH	F	GH	F	F	E	E	F	F	F		
4oz / 8oz / 16oz PE UNPRES														
2oz Cr <sup>6+</sup>	D	D	IJ	D	IJ	D	D	D	D	D	D	D		
QT INORGANIC CHEMICAL METALS														
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz	F	F	KL	F	KL	F	F	F	F	F	F	F		
PT CYANIDE														
PT NITROGEN FORMS														
PT TOTAL SULFIDE														
2oz NITRATE / NITRITE														
PT TOTAL ORGANIC CARBON														
PT CHEMICAL OXYGEN DEMAND														
PIA PHENOLICS														
40ml VOA VIAL TRAVEL BLANK														
40ml VOA VIAL	ABC	ABC	A→F	ABC	A→P	ABC	ABC	ABC	ABC	ABC	ABC	ABC		
QT EPA 1664														
PT ODOR														
RADIOLOGICAL														
BACTERIOLOGICAL														
40 ml VOA VIAL- 504														
QT EPA 508/608/8080														
QT EPA 515.1/8150														
QT EPA 525														
QT EPA 525 TRAVEL BLANK														
40ml EPA 547														
40ml EPA 531.1														
8oz RPA 548														
QT EPA 549														
QT EPA 8015M														
QT EPA 8270														
8oz / 16oz / 32oz AMBER														
8oz / 16oz / 32oz JAR														
SOIL SLEEVE														
PCB VIAL														
PLASTIC BAG														
TEDLAR BAG														
FERROUS IRON														
ENCORE														
SMART KIT														
SUMMA CANISTER														

Comments: \_\_\_\_\_

Sample Numbering Completed By: AMA Date/Time: 10-23-19 21:03 Rev 21 05/23/2016



Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1936293-01</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> TB-8-102319 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 07:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-8-102319 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1936293-02</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-18-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 08:25 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-18-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936293-03</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-18-4 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 09:10 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-18-4 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1936293-04</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-18-3 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 09:40 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-18-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1936293-05</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-18-2 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 10:05 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-18-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

<b>1936293-06</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> DUP-7-4Q19 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 10:15 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-7-4Q19 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1936293-07</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> EB-8-102319 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 11:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-8-102319 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936293-08</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-6 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 07:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-6 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936293-09</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-10 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 08:25 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-10 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1936293-10</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-5 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 09:10 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936293-11</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> DUP-6-4Q19 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 09:15 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-6-4Q19 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936293-12</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-15 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 10:10 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-15 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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<b>1936293-13</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-8 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 11:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-8 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936293-14</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> DUP-7-4Q19 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 11:35 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-7-4Q19 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936293-15</b>	<b>COC Number:</b> --- <b>Project Number:</b> JPL/NASA <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-7 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/23/2019 19:45 <b>Sampling Date:</b> 10/23/2019 12:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-7 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-01	<b>Client Sample Name:</b> JPL/NASA, TB-8-102319, 10/23/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-01	<b>Client Sample Name:</b> JPL/NASA, TB-8-102319, 10/23/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-01	<b>Client Sample Name:</b> JPL/NASA, TB-8-102319, 10/23/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 10:49	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-01	<b>Client Sample Name:</b> JPL/NASA, TB-8-102319, 10/23/2019 7:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 10:49	MGC	MS-V5	1	B060559

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Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-02	<b>Client Sample Name:</b> JPL/NASA, MW-18-5, 10/23/2019 8:25:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936293-02 Client Sample Name: JPL/NASA, MW-18-5, 10/23/2019 8:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
<b>Styrene</b>	<b>0.12</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.12</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-02	<b>Client Sample Name:</b> JPL/NASA, MW-18-5, 10/23/2019 8:25:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 11:14	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-02	<b>Client Sample Name:</b> JPL/NASA, MW-18-5, 10/23/2019 8:25:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 11:14	MGC	MS-V5	1	B060559

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**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-02	<b>Client Sample Name:</b> JPL/NASA, MW-18-5, 10/23/2019 8:25:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/10/19 08:45	SAV	IC6	1	B061765

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**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-02	<b>Client Sample Name:</b> JPL/NASA, MW-18-5, 10/23/2019 8:25:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000067	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 11:59		MRC	IC-4	1	B060494
2	EPA-200.8	10/24/19 13:00	10/24/19 18:17		AS1	PE-EL2	1	B060371

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Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936293-03 Client Sample Name: JPL/NASA, MW-18-4, 10/23/2019 9:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
<b>Carbon tetrachloride</b>	<b>2.2</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.17</b>	<b>EPA-524.2</b>	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.93</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936293-03 Client Sample Name: JPL/NASA, MW-18-4, 10/23/2019 9:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.67</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>1.1</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1936293-03      **Client Sample Name:** JPL/NASA, MW-18-4, 10/23/2019 9:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 11:38	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-03	<b>Client Sample Name:</b> JPL/NASA, MW-18-4, 10/23/2019 9:10:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 11:38	MGC	MS-V5	1	B060559

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**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-03	<b>Client Sample Name:</b> JPL/NASA, MW-18-4, 10/23/2019 9:10:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	16	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/10/19 09:01	SAV	IC6	1	B061765

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-03	<b>Client Sample Name:</b> JPL/NASA, MW-18-4, 10/23/2019 9:10:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0019	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	2.3	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 12:08		MRC	IC-4	1	B060494
2	EPA-200.8	10/24/19 13:00	10/24/19 18:19		AS1	PE-EL2	1	B060371

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936293-04 Client Sample Name: JPL/NASA, MW-18-3, 10/23/2019 9:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
<b>Carbon tetrachloride</b>	<b>0.18</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.17</b>	<b>EPA-524.2</b>	ND	<b>J</b>	1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1936293-04      **Client Sample Name:** JPL/NASA, MW-18-3, 10/23/2019 9:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-04	<b>Client Sample Name:</b> JPL/NASA, MW-18-3, 10/23/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	118	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 12:02	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-04	<b>Client Sample Name:</b> JPL/NASA, MW-18-3, 10/23/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 12:02	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-04	<b>Client Sample Name:</b> JPL/NASA, MW-18-3, 10/23/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.0	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/10/19 09:16	SAV	IC6	1	B061765

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-04	<b>Client Sample Name:</b> JPL/NASA, MW-18-3, 10/23/2019 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0017	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>1.5</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 12:18		MRC	IC-4	1	B060494
2	EPA-200.8	10/24/19 13:00	10/24/19 18:20		AS1	PE-EL2	1	B060371

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Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936293-05 Client Sample Name: JPL/NASA, MW-18-2, 10/23/2019 10:05:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-05	<b>Client Sample Name:</b> JPL/NASA, MW-18-2, 10/23/2019 10:05:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-05	<b>Client Sample Name:</b> JPL/NASA, MW-18-2, 10/23/2019 10:05:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 12:26	MGC	MS-V5	1	B060559

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-05	<b>Client Sample Name:</b> JPL/NASA, MW-18-2, 10/23/2019 10:05:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 12:26	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-05	<b>Client Sample Name:</b> JPL/NASA, MW-18-2, 10/23/2019 10:05:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/10/19 09:31	SAV	IC6	1	B061765

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**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-05	<b>Client Sample Name:</b> JPL/NASA, MW-18-2, 10/23/2019 10:05:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000075	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 12:27		MRC	IC-4	1	B060494
2	EPA-200.8	10/24/19 13:00	10/24/19 18:22		AS1	PE-EL2	1	B060371

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Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-06	<b>Client Sample Name:</b> JPL/NASA, DUP-7-4Q19, 10/23/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-06	<b>Client Sample Name:</b> JPL/NASA, DUP-7-4Q19, 10/23/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-06	<b>Client Sample Name:</b> JPL/NASA, DUP-7-4Q19, 10/23/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 12:50	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-06	<b>Client Sample Name:</b> JPL/NASA, DUP-7-4Q19, 10/23/2019 10:15:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 12:50	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-06	<b>Client Sample Name:</b> JPL/NASA, DUP-7-4Q19, 10/23/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/10/19 10:17	SAV	IC6	1	B061765

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-06	<b>Client Sample Name:</b> JPL/NASA, DUP-7-4Q19, 10/23/2019 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.000088	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 12:56	MRC	IC-4	1	B060494
2	EPA-200.8	10/24/19 13:00	10/24/19 18:24	AS1	PE-EL2	1	B060371

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Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-07	<b>Client Sample Name:</b> JPL/NASA, EB-8-102319, 10/23/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-07	<b>Client Sample Name:</b> JPL/NASA, EB-8-102319, 10/23/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-07	<b>Client Sample Name:</b> JPL/NASA, EB-8-102319, 10/23/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 13:14	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-07	<b>Client Sample Name:</b> JPL/NASA, EB-8-102319, 10/23/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 13:14	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-07	<b>Client Sample Name:</b> JPL/NASA, EB-8-102319, 10/23/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/10/19 10:33	SAV	IC6	1	B061765

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-07	<b>Client Sample Name:</b> JPL/NASA, EB-8-102319, 10/23/2019 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19	13:06	MRC	IC-4	1	B060494
2	EPA-200.8	10/24/19 13:00	10/24/19	18:26	AS1	PE-EL2	1	B060371

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Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-08	<b>Client Sample Name:</b> JPL/NASA, MW-6, 10/23/2019 7:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>0.54</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-08	<b>Client Sample Name:</b> JPL/NASA, MW-6, 10/23/2019 7:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Tetrachloroethene</b>	<b>0.53</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.23</b>	<b>EPA-524.2</b>	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
<b>Trichloroethene</b>	<b>2.6</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.19</b>	<b>EPA-524.2</b>	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-08	<b>Client Sample Name:</b> JPL/NASA, MW-6, 10/23/2019 7:30:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 08:24	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-08	<b>Client Sample Name:</b> JPL/NASA, MW-6, 10/23/2019 7:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 08:24	MGC	MS-V5	1	B060559

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-08	<b>Client Sample Name:</b> JPL/NASA, MW-6, 10/23/2019 7:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.4	ug/L	4.0	0.76	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/10/19 07:44	SAV	IC6	1	B061765

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-08	<b>Client Sample Name:</b> JPL/NASA, MW-6, 10/23/2019 7:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0021	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	39	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 11:20	MRC	IC-4	1	B060494
2	EPA-200.8	10/24/19 13:00	10/24/19 18:02	AS1	PE-EL2	1	B060371

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Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-09	<b>Client Sample Name:</b> JPL/NASA, MW-10, 10/23/2019 8:25:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-09	<b>Client Sample Name:</b> JPL/NASA, MW-10, 10/23/2019 8:25:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-09	<b>Client Sample Name:</b> JPL/NASA, MW-10, 10/23/2019 8:25:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 13:39	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-09	<b>Client Sample Name:</b> JPL/NASA, MW-10, 10/23/2019 8:25:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 13:39	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-09	<b>Client Sample Name:</b> JPL/NASA, MW-10, 10/23/2019 8:25:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/10/19 10:48	SAV	IC6	1	B061765

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**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-09	<b>Client Sample Name:</b> JPL/NASA, MW-10, 10/23/2019 8:25:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0011	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	4.1	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 13:15	MRC	IC-4	1	B060494
2	EPA-200.8	10/24/19 13:00	10/24/19 18:27	AS1	PE-EL2	1	B060371

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Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-10	<b>Client Sample Name:</b> JPL/NASA, MW-5, 10/23/2019 9:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-10	<b>Client Sample Name:</b> JPL/NASA, MW-5, 10/23/2019 9:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-10	<b>Client Sample Name:</b> JPL/NASA, MW-5, 10/23/2019 9:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	118	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 14:03	MGC	MS-V5	1	B060559

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-10	<b>Client Sample Name:</b> JPL/NASA, MW-5, 10/23/2019 9:10:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 14:03	MGC	MS-V5	1	B060559

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Tidewater Inc.  
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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-10	<b>Client Sample Name:</b> JPL/NASA, MW-5, 10/23/2019 9:10:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/10/19 11:03	SAV	IC6	1	B061765

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**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-10	<b>Client Sample Name:</b> JPL/NASA, MW-5, 10/23/2019 9:10:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00018	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	0.74	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 13:25		MRC	IC-4	1	B060494
2	EPA-200.8	10/24/19 13:00	10/24/19 18:29		AS1	PE-EL2	1	B060371

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/12/2019 8:58
Project: JPL- GW Monitoring Wells
Project Number: 4Q19
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1936293-11) and Client Sample Name (JPL/NASA, DUP-6-4Q19, 10/23/2019 9:15:00AM, Blaine Tech)

Main data table with columns: Constituent, Result, Units, PQL, MDL, Method, MB Bias, Lab Quals, Run #. Lists various VOCs like Benzene, Bromobenzene, etc.

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID:	1936293-11	Client Sample Name:	JPL/NASA, DUP-6-4Q19, 10/23/2019 9:15:00AM, Blaine Tech					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-11	<b>Client Sample Name:</b> JPL/NASA, DUP-6-4Q19, 10/23/2019 9:15:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	117	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	95.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 14:27	MGC	MS-V5	1	B060559

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-11	<b>Client Sample Name:</b> JPL/NASA, DUP-6-4Q19, 10/23/2019 9:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 14:27	MGC	MS-V5	1	B060559

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-11	<b>Client Sample Name:</b> JPL/NASA, DUP-6-4Q19, 10/23/2019 9:15:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/08/19 22:00	11/10/19 11:19	SAV	IC6	1	B061765

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-11	<b>Client Sample Name:</b> JPL/NASA, DUP-6-4Q19, 10/23/2019 9:15:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00018	mg/L	0.00020	0.000032	EPA-218.6	ND	J	1
Total Recoverable Chromium	0.65	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 13:35	MRC	IC-4	1	B060494
2	EPA-200.8	10/24/19 13:00	10/24/19 18:31	AS1	PE-EL2	1	B060371

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Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-12	<b>Client Sample Name:</b> JPL/NASA, MW-15, 10/23/2019 10:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936293-12		Client Sample Name: JPL/NASA, MW-15, 10/23/2019 10:10:00AM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-12	<b>Client Sample Name:</b> JPL/NASA, MW-15, 10/23/2019 10:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	121	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 10:00	10/28/19 14:51	MGC	MS-V5	1	B060560

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-12	<b>Client Sample Name:</b> JPL/NASA, MW-15, 10/23/2019 10:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 10:00	10/28/19 14:51	MGC	MS-V5	1	B060560

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-12	<b>Client Sample Name:</b> JPL/NASA, MW-15, 10/23/2019 10:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/09/19 12:00	11/10/19 12:35	SAV	IC6	1	B061766

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-12	<b>Client Sample Name:</b> JPL/NASA, MW-15, 10/23/2019 10:10:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00053	mg/L	0.00020	0.000032	EPA-218.6	0.000037		1
<b>Total Recoverable Chromium</b>	<b>1.7</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>	<b>J</b>	<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 14:03		MRC	IC-4	1	B060495
2	EPA-200.8	10/24/19 13:00	10/24/19 18:52		AS1	PE-EL2	1	B060372

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Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-13	<b>Client Sample Name:</b> JPL/NASA, MW-8, 10/23/2019 11:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-13	<b>Client Sample Name:</b> JPL/NASA, MW-8, 10/23/2019 11:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-13	<b>Client Sample Name:</b> JPL/NASA, MW-8, 10/23/2019 11:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	118	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 15:15	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-13	<b>Client Sample Name:</b> JPL/NASA, MW-8, 10/23/2019 11:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 15:15	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-13	<b>Client Sample Name:</b> JPL/NASA, MW-8, 10/23/2019 11:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	7.8	mg/L	0.50	0.15	EPA-300.0	ND		1
Nitrate as N	0.72	mg/L	0.10	0.042	EPA-300.0	ND		1
Sulfate	31	mg/L	1.0	0.20	EPA-300.0	ND		1
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		2
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		3
ortho-Phosphate as P	ND	mg/L	0.050	0.017	EPA-365.1	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	10/23/19 20:00	10/24/19 07:53	SAV	IC5	1	B060385
2	EPA-353.2	10/24/19 10:00	10/24/19 10:04	MC1	KONE-1	1	B060461
3	EPA-314.0	11/09/19 12:00	11/10/19 13:37	SAV	IC6	1	B061766
4	EPA-365.1	10/24/19 09:57	10/24/19 10:01	MC1	SC-1	1	B060472

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-13	<b>Client Sample Name:</b> JPL/NASA, MW-8, 10/23/2019 11:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00063	mg/L	0.00020	0.000032	EPA-218.6	0.000037		1
Total Recoverable Chromium	2.1	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 15:01		MRC	IC-4	1	B060495
2	EPA-200.8	10/24/19 13:00	10/24/19 19:11		AS1	PE-EL2	1	B060372

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1936293-14		Client Sample Name: JPL/NASA, DUP-7-4Q19, 10/23/2019 11:35:00AM, Blaine Tech						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-14	<b>Client Sample Name:</b> JPL/NASA, DUP-7-4Q19, 10/23/2019 11:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-14	<b>Client Sample Name:</b> JPL/NASA, DUP-7-4Q19, 10/23/2019 11:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	120	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 15:39	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-14	<b>Client Sample Name:</b> JPL/NASA, DUP-7-4Q19, 10/23/2019 11:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 15:39	MGC	MS-V5	1	B060559

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-14	<b>Client Sample Name:</b> JPL/NASA, DUP-7-4Q19, 10/23/2019 11:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/09/19 12:00	11/10/19 13:52	SAV	IC6	1	B061766

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-14	<b>Client Sample Name:</b> JPL/NASA, DUP-7-4Q19, 10/23/2019 11:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00064	mg/L	0.00020	0.000032	EPA-218.6	0.000037		1
Total Recoverable Chromium	4.0	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 15:11		MRC	IC-4	1	B060495
2	EPA-200.8	10/24/19 13:00	10/24/19 19:12		AS1	PE-EL2	1	B060372

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Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-15	<b>Client Sample Name:</b> JPL/NASA, MW-7, 10/23/2019 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>3.8</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-15	<b>Client Sample Name:</b> JPL/NASA, MW-7, 10/23/2019 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936293-15	<b>Client Sample Name:</b> JPL/NASA, MW-7, 10/23/2019 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	118	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 16:03	MGC	MS-V5	1	B060559

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936293-15	<b>Client Sample Name:</b> JPL/NASA, MW-7, 10/23/2019 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/28/19 06:00	10/28/19 16:03	MGC	MS-V5	1	B060559

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**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936293-15	<b>Client Sample Name:</b> JPL/NASA, MW-7, 10/23/2019 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	79	mg/L	0.50	0.15	EPA-300.0	ND		1
Nitrate as N	1.6	mg/L	0.10	0.042	EPA-300.0	ND		1
Sulfate	51	mg/L	1.0	0.20	EPA-300.0	ND		1
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		2
Perchlorate	0.79	ug/L	4.0	0.76	EPA-314.0	ND	J	3
ortho-Phosphate as P	0.030	mg/L	0.050	0.017	EPA-365.1	ND	J	4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	10/23/19 20:00	10/24/19 08:11	MRC	IC5	1	B060385
2	EPA-353.2	10/24/19 10:00	10/24/19 10:04	MC1	KONE-1	1	B060461
3	EPA-314.0	11/09/19 12:00	11/10/19 14:07	SAV	IC6	1	B061766
4	EPA-365.1	10/24/19 09:57	10/24/19 10:03	MC1	SC-1	1	B060472

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**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936293-15	<b>Client Sample Name:</b> JPL/NASA, MW-7, 10/23/2019 12:30:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0010	mg/L	0.00020	0.000032	EPA-218.6	0.000037		1
Total Recoverable Chromium	20	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 10:00	10/25/19 15:20		MRC	IC-4	1	B060495
2	EPA-200.8	10/24/19 13:00	10/24/19 19:14		AS1	PE-EL2	1	B060372

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Reported: 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060559</b>						
Benzene	B060559-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B060559-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B060559-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B060559-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B060559-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B060559-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B060559-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B060559-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B060559-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B060559-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B060559-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B060559-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B060559-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B060559-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B060559-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B060559-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B060559-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B060559-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B060559-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B060559-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B060559-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B060559-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B060559-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B060559-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B060559-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B060559-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B060559-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B060559-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B060559-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B060559-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B060559-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B060559-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B060559-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B060559-BLK1	ND	ug/L	0.50	0.14	

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### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060559</b>						
trans-1,3-Dichloropropene	B060559-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B060559-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B060559-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B060559-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B060559-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B060559-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B060559-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B060559-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B060559-BLK1	ND	ug/L	0.50	0.12	
Styrene	B060559-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B060559-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B060559-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B060559-BLK1	ND	ug/L	0.50	0.23	
Toluene	B060559-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B060559-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B060559-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B060559-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B060559-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B060559-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B060559-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B060559-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B060559-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B060559-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B060559-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B060559-BLK1	ND	ug/L	0.50	0.18	
Acetone	B060559-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B060559-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B060559-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B060559-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B060559-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B060559-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B060559-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B060559-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B060559-BLK1	ND	ug/L	4.0	1.3	

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Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
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**QC Batch ID: B060559**

Ethyl t-butyl ether	B060559-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B060559-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B060559-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B060559-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B060559-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B060559-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B060559-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B060559-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B060559-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B060559-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B060559-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B060559-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B060559-BLK1	ND	ug/L	0.50	0.13	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>B060559-BLK1</b>	<b>113</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>B060559-BLK1</b>	<b>101</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>B060559-BLK1</b>	<b>104</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

**QC Batch ID: B060560**

Benzene	B060560-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B060560-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B060560-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B060560-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B060560-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B060560-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B060560-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B060560-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B060560-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B060560-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B060560-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B060560-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B060560-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B060560-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B060560-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B060560-BLK1	ND	ug/L	0.50	0.093	

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Reported: 11/12/2019 8:58  
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Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060560</b>						
Dibromochloromethane	B060560-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B060560-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B060560-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B060560-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B060560-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B060560-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B060560-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B060560-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B060560-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B060560-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B060560-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B060560-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B060560-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B060560-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B060560-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B060560-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B060560-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B060560-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B060560-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B060560-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B060560-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B060560-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B060560-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B060560-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B060560-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B060560-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B060560-BLK1	ND	ug/L	0.50	0.12	
Styrene	B060560-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B060560-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B060560-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B060560-BLK1	ND	ug/L	0.50	0.23	
Toluene	B060560-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B060560-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B060560-BLK1	ND	ug/L	0.50	0.15	

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**Reported:** 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060560</b>						
1,1,1-Trichloroethane	B060560-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B060560-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B060560-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B060560-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B060560-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B060560-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B060560-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B060560-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B060560-BLK1	ND	ug/L	0.50	0.18	
Acetone	B060560-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B060560-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B060560-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B060560-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B060560-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B060560-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B060560-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B060560-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B060560-BLK1	ND	ug/L	4.0	1.3	
Ethyl t-butyl ether	B060560-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B060560-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B060560-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B060560-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B060560-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B060560-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B060560-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B060560-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B060560-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B060560-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B060560-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B060560-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B060560-BLK1	ND	ug/L	0.50	0.13	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>B060560-BLK1</b>	<b>107</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>B060560-BLK1</b>	<b>102</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>B060560-BLK1</b>	<b>105</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B060559</b>										
Benzene	B060559-BS1	LCS	22.890	25.000	ug/L	91.6		70 - 130		
Bromodichloromethane	B060559-BS1	LCS	27.630	25.000	ug/L	111		70 - 130		
Chlorobenzene	B060559-BS1	LCS	23.390	25.000	ug/L	93.6		70 - 130		
Chloroethane	B060559-BS1	LCS	23.970	25.000	ug/L	95.9		70 - 130		
1,4-Dichlorobenzene	B060559-BS1	LCS	24.960	25.000	ug/L	99.8		70 - 130		
1,1-Dichloroethane	B060559-BS1	LCS	25.070	25.000	ug/L	100		70 - 130		
1,1-Dichloroethene	B060559-BS1	LCS	25.310	25.000	ug/L	101		70 - 130		
Toluene	B060559-BS1	LCS	22.400	25.000	ug/L	89.6		70 - 130		
Trichloroethene	B060559-BS1	LCS	24.420	25.000	ug/L	97.7		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B060559-BS1	LCS	10.970	10.000	ug/L	110		75 - 125		
Toluene-d8 (Surrogate)	B060559-BS1	LCS	10.330	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	B060559-BS1	LCS	10.300	10.000	ug/L	103		80 - 120		
<b>QC Batch ID: B060560</b>										
Benzene	B060560-BS1	LCS	22.410	25.000	ug/L	89.6		70 - 130		
Bromodichloromethane	B060560-BS1	LCS	28.540	25.000	ug/L	114		70 - 130		
Chlorobenzene	B060560-BS1	LCS	23.390	25.000	ug/L	93.6		70 - 130		
Chloroethane	B060560-BS1	LCS	23.170	25.000	ug/L	92.7		70 - 130		
1,4-Dichlorobenzene	B060560-BS1	LCS	24.520	25.000	ug/L	98.1		70 - 130		
1,1-Dichloroethane	B060560-BS1	LCS	24.810	25.000	ug/L	99.2		70 - 130		
1,1-Dichloroethene	B060560-BS1	LCS	25.220	25.000	ug/L	101		70 - 130		
Toluene	B060560-BS1	LCS	22.730	25.000	ug/L	90.9		70 - 130		
Trichloroethene	B060560-BS1	LCS	25.330	25.000	ug/L	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B060560-BS1	LCS	11.390	10.000	ug/L	114		75 - 125		
Toluene-d8 (Surrogate)	B060560-BS1	LCS	9.9700	10.000	ug/L	99.7		80 - 120		
4-Bromofluorobenzene (Surrogate)	B060560-BS1	LCS	10.110	10.000	ug/L	101		80 - 120		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2019 8:58
Project: JPL- GW Monitoring Wells
Project Number: 4Q19
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Source Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Qualls. Includes QC Batch ID: B060559 and Used client sample: Y - Description: MW-6, 10/23/2019 07:30.

Table with columns: Constituent, Source Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Qualls. Includes QC Batch ID: B060560 and Used client sample: Y - Description: MW-15, 10/23/2019 10:10.

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B060560</b>		Used client sample: Y - Description: MW-15, 10/23/2019 10:10								
1,1-Dichloroethene	MS	1936293-12	ND	24.520	25.000	ug/L		98.1		70 - 130
	MSD	1936293-12	ND	24.550	25.000	ug/L	0.1	98.2	20	70 - 130
Toluene	MS	1936293-12	ND	23.790	25.000	ug/L		95.2		70 - 130
	MSD	1936293-12	ND	23.770	25.000	ug/L	0.1	95.1	20	70 - 130
Trichloroethene	MS	1936293-12	ND	25.270	25.000	ug/L		101		70 - 130
	MSD	1936293-12	ND	25.320	25.000	ug/L	0.2	101	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1936293-12	ND	11.360	10.000	ug/L		114		75 - 125
	MSD	1936293-12	ND	11.630	10.000	ug/L	2.3	116		75 - 125
Toluene-d8 (Surrogate)	MS	1936293-12	ND	10.340	10.000	ug/L		103		80 - 120
	MSD	1936293-12	ND	10.040	10.000	ug/L	2.9	100		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1936293-12	ND	10.250	10.000	ug/L		102		80 - 120
	MSD	1936293-12	ND	10.370	10.000	ug/L	1.2	104		80 - 120

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2) TICs

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060559</b>						
Chloroacetonitrile	B060559-BLK1	0	ug/L			
1-Chlorobutane	B060559-BLK1	0	ug/L			
1,1-Dichloropropanone	B060559-BLK1	0	ug/L			
Methyl acrylate	B060559-BLK1	0	ug/L			
Nitrobenzene	B060559-BLK1	0	ug/L			
2-Nitropropane	B060559-BLK1	0	ug/L			
<b>QC Batch ID: B060560</b>						
Chloroacetonitrile	B060560-BLK1	0	ug/L			
1-Chlorobutane	B060560-BLK1	0	ug/L			
1,1-Dichloropropanone	B060560-BLK1	0	ug/L			
Methyl acrylate	B060560-BLK1	0	ug/L			
Nitrobenzene	B060560-BLK1	0	ug/L			
2-Nitropropane	B060560-BLK1	0	ug/L			

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060385</b>						
Chloride	B060385-BLK1	ND	mg/L	0.50	0.15	
Nitrate as N	B060385-BLK1	ND	mg/L	0.10	0.042	
Sulfate	B060385-BLK1	ND	mg/L	1.0	0.20	
<b>QC Batch ID: B060461</b>						
Nitrite as N	B060461-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B060472</b>						
ortho-Phosphate as P	B060472-BLK1	ND	mg/L	0.050	0.017	
<b>QC Batch ID: B061765</b>						
Perchlorate	B061765-BLK1	ND	ug/L	4.0	0.76	
<b>QC Batch ID: B061766</b>						
Perchlorate	B061766-BLK1	ND	ug/L	4.0	0.76	

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B060385</b>										
Chloride	B060385-BS1	LCS	49.270	50.000	mg/L	98.5		90 - 110		
Nitrate as N	B060385-BS1	LCS	4.9340	5.0000	mg/L	98.7		90 - 110		
Sulfate	B060385-BS1	LCS	98.166	100.00	mg/L	98.2		90 - 110		
<b>QC Batch ID: B060461</b>										
Nitrite as N	B060461-BS1	LCS	0.52030	0.50000	mg/L	104		90 - 110		
<b>QC Batch ID: B060472</b>										
ortho-Phosphate as P	B060472-BS1	LCS	0.52010	0.50000	mg/L	104		90 - 110		
<b>QC Batch ID: B061765</b>										
Perchlorate	B061765-BS1	LCS	10.654	10.000	ug/L	107		85 - 115		
<b>QC Batch ID: B061766</b>										
Perchlorate	B061766-BS1	LCS	10.563	10.000	ug/L	106		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2019 8:58
Project: JPL- GW Monitoring Wells
Project Number: 4Q19
Project Manager: David Conner

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Source Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Control Limits Percent Recovery, Lab Quals. Includes QC Batch IDs B060385, B060461, B060472, B061765, and B061766.

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060371</b>						
Total Recoverable Chromium	B060371-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B060372</b>						
Total Recoverable Chromium	B060372-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B060494</b>						
Hexavalent Chromium	B060494-BLK1	ND	mg/L	0.00020	0.000032	
<b>QC Batch ID: B060495</b>						
Hexavalent Chromium	B060495-BLK1	0.000037000	mg/L	0.00020	0.000032	J

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Metals Analysis

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060371</b>										
Total Recoverable Chromium	B060371-BS1	LCS	41.383	40.000	ug/L	103		85 - 115		
<b>QC Batch ID: B060372</b>										
Total Recoverable Chromium	B060372-BS1	LCS	43.057	40.000	ug/L	108		85 - 115		
<b>QC Batch ID: B060494</b>										
Hexavalent Chromium	B060494-BS1	LCS	0.020382	0.020000	mg/L	102		90 - 110		
<b>QC Batch ID: B060495</b>										
Hexavalent Chromium	B060495-BS1	LCS	0.020243	0.020000	mg/L	101		90 - 110		

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B060371</b>		Used client sample: Y - Description: MW-6, 10/23/2019 07:30								
Total Recoverable Chromium	DUP	1936293-08	38.501	35.899		ug/L	7.0		20	
	MS	1936293-08	38.501	79.335	40.000	ug/L		102		70 - 130
	MSD	1936293-08	38.501	81.232	40.000	ug/L	2.4	107	20	70 - 130
<b>QC Batch ID: B060372</b>		Used client sample: Y - Description: MW-15, 10/23/2019 10:10								
Total Recoverable Chromium	DUP	1936293-12	1.7410	5.1750		ug/L	99.3		20	Q01
	MS	1936293-12	1.7410	41.645	40.000	ug/L		99.8		70 - 130
	MSD	1936293-12	1.7410	42.866	40.000	ug/L	2.9	103	20	70 - 130
<b>QC Batch ID: B060494</b>		Used client sample: Y - Description: MW-6, 10/23/2019 07:30								
Hexavalent Chromium	DUP	1936293-08	0.0020990	0.0021170		mg/L	0.9		10	
	MS	1936293-08	0.0020990	0.022936	0.020202	mg/L		103		90 - 110
	MSD	1936293-08	0.0020990	0.023379	0.020202	mg/L	1.9	105	10	90 - 110
<b>QC Batch ID: B060495</b>		Used client sample: Y - Description: MW-15, 10/23/2019 10:10								
Hexavalent Chromium	DUP	1936293-12	0.00053100	0.00051600		mg/L	2.9		10	
	MS	1936293-12	0.00053100	0.020909	0.020202	mg/L		101		90 - 110
	MSD	1936293-12	0.00053100	0.021303	0.020202	mg/L	1.9	103	10	90 - 110

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Powell, OH 43065

**Reported:** 11/12/2019 8:58  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- Q01 Sample precision is not within the control limits.



Date of Report: 11/12/2019

David Conner

Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Client Project: 4Q19  
BCL Project: JPL- GW Monitoring Wells  
BCL Work Order: 1936445  
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/24/2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda  
Client Service Rep

Stuart Buttram  
Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Chain of Custody Form

Page 1 of 1



19-36445

Report To: Tidewater, Inc. Client: Tidewater  
 Address: 3761 Alhucks Drive Att: David Conner  
 City: Powell State: OH Zip: 43065  
 Phone: 626 1288 - 5715 Fax: 614 792 - 2697  
 Email: david.conner@alideh2o.net  
 Submission #: 4Q19  
 Sampler(s): Blaine Tech

Project Description: JPL-GW Monitoring  
 Project Code: 4Q19  
 Sampler(s): Blaine Tech

Sample #	Sample Description	Date	Time	Matrix*	Analysis Requested										Notes					
					VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr 218.5 (mg/L)	Cl, NO3, NO2, SO4	Orthophosphate 365.1	DO	C1	PCOD	MIBs		GOT				
-1	TB-9-1024119	10/24/19	0900	W	X															
-2	MW-13		1605	W	X															
-3	MW-16		1030	W	X															
-4	MW-1		1225	W	X															
-5	MW-9		1325	W	X															

Matrix Types: S = Soil SL = Sludge DW = Drinking Water WW = Wastewater GW = Groundwater L = Liquid M = Miscellaneous O = Other  
 Turnaround # of working days: 24 Hr Rush 48 Hr Rush 3-5 Day Rush 3-5 Day Rush Normal (10 - Days)  
 Lab TAT Approval: \*Additional Charges May Apply

Comments: PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MS/MSD) 90% Level III and 10% Level IV data validation required; Level IV Notated on C of C NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)

Cost Center: 1. Relinquished By: 2. Relinquished By: 3. Relinquished By: Global ID: 1. Received By: 2. Received By: 3. Received By: Date: 10/24/19 Time: 1635 Date: 10/24/19 Time: 2250 Date: 10/24/19 Time: 2250

Client: Tidewater  
 Address: 3761 Alhucks Drive  
 City: Powell State: OH Zip: 43065  
 Are there any tests with holding times? less than or equal to 48 hours? Yes No  
 \*Standard Turnaround = 30

CHIEF BY DISTRIBUTION  
 SIGNATURE

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327 - 4911 Fax: (661) 327 - 1918 www.bclabs.com

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 1

Submission #: 19-36445

SHIPPING INFORMATION: Fed Ex  UPS  Ontrac  Hand Delivery  BC Lab Field Service  Other  (Specify) \_\_\_\_\_

SHIPPING CONTAINER: Ice Chest  None  Box  Other  (Specify) \_\_\_\_\_

FREE LIQUID: YES  NO  W / S \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received:  YES  NO

Emissivity: 0.98 Container: VOA Thermometer ID: 208 Date/Time: 10/24/2016

Temperature: (A) 2.1 °C / (C) 2.1 °C Analyst Init: [Signature]

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES		D	D	GH	GH					
4oz / 8oz / 16oz PE UNPRES		E	E							
2oz Cr <sup>4</sup>			FE	II	II					
QT INORGANIC CHEMICAL METALS			FE							
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz			FG	KL	KL					
PT CYANIDE			GH							
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		AB	ABC	A+F	A+F					
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 5080S/0080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 545										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: \_\_\_\_\_

Sample Numbering Completed By: [Signature] Date/Time: 10-24-19 2313 Rev 21 05/23/2016

A = Actual / C = Corrected

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1936445-01</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> TB-9-1024119 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/24/2019 22:50 <b>Sampling Date:</b> 10/24/2019 09:00 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-9-1024119 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936445-02</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-13 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/24/2019 22:50 <b>Sampling Date:</b> 10/24/2019 16:05 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-13 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936445-03</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-16 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/24/2019 22:50 <b>Sampling Date:</b> 10/24/2019 10:30 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-16 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

<b>1936445-04</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-1 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/24/2019 22:50 <b>Sampling Date:</b> 10/24/2019 12:25 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-1 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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<b>1936445-05</b>	<b>COC Number:</b> --- <b>Project Number:</b> NASA/JPL <b>Sampling Location:</b> --- <b>Sampling Point:</b> MW-9 <b>Sampled By:</b> Blaine Tech of BTST	<b>Receive Date:</b> 10/24/2019 22:50 <b>Sampling Date:</b> 10/24/2019 13:25 <b>Sample Depth:</b> --- <b>Lab Matrix:</b> Water <b>Sample Type:</b> Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-9 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-01	<b>Client Sample Name:</b> NASA/JPL, TB-9-1024119, 10/24/2019 9:00:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-01	<b>Client Sample Name:</b> NASA/JPL, TB-9-1024119, 10/24/2019 9:00:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-01	<b>Client Sample Name:</b> NASA/JPL, TB-9-1024119, 10/24/2019 9:00:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/29/19 07:00	10/29/19 11:03	MGC	MS-V5	1	B060690

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936445-01	<b>Client Sample Name:</b> NASA/JPL, TB-9-1024119, 10/24/2019 9:00:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/29/19 07:00	10/29/19 11:03	MGC	MS-V5	1	B060690

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Powell, OH 43065

Reported: 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-02	<b>Client Sample Name:</b> NASA/JPL, MW-13, 10/24/2019 4:05:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
<b>Chloroform</b>	<b>1.1</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

**BCL Sample ID:** 1936445-02      **Client Sample Name:** NASA/JPL, MW-13, 10/24/2019 4:05:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
<b>Trichlorofluoromethane</b>	<b>2.8</b>	<b>ug/L</b>	<b>0.50</b>	<b>0.14</b>	<b>EPA-524.2</b>	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-02	<b>Client Sample Name:</b> NASA/JPL, MW-13, 10/24/2019 4:05:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/29/19 07:00	10/29/19 11:28	MGC	MS-V5	1	B060690

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936445-02	<b>Client Sample Name:</b> NASA/JPL, MW-13, 10/24/2019 4:05:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/29/19 07:00	10/29/19 11:28	MGC	MS-V5	1	B060690

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936445-02	<b>Client Sample Name:</b> NASA/JPL, MW-13, 10/24/2019 4:05:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	41	mg/L	0.50	0.15	EPA-300.0	ND		1
Nitrate as N	4.9	mg/L	0.10	0.042	EPA-300.0	ND		1
Sulfate	57	mg/L	1.0	0.20	EPA-300.0	ND		1
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		2
Perchlorate	40	ug/L	20	3.8	EPA-314.0	ND	A07	3
ortho-Phosphate as P	0.057	mg/L	0.050	0.017	EPA-365.1	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	10/25/19 08:00	10/25/19 13:51	MRC	IC1	1	B060501
2	EPA-353.2	10/25/19 08:04	10/25/19 08:04	MC1	KONE-1	1	B060622
3	EPA-314.0	11/09/19 12:00	11/11/19 13:44	SAV	IC6	5	B061767
4	EPA-365.1	10/25/19 07:32	10/25/19 07:43	MC1	SC-1	1	B060646

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-03	<b>Client Sample Name:</b> NASA/JPL, MW-16, 10/24/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-03	<b>Client Sample Name:</b> NASA/JPL, MW-16, 10/24/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-03	<b>Client Sample Name:</b> NASA/JPL, MW-16, 10/24/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/29/19 07:00	10/29/19 11:51	MGC	MS-V5	1	B060690

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936445-03	<b>Client Sample Name:</b> NASA/JPL, MW-16, 10/24/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/29/19 07:00	10/29/19 11:51	MGC	MS-V5	1	B060690

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936445-03	<b>Client Sample Name:</b> NASA/JPL, MW-16, 10/24/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	77	mg/L	0.50	0.15	EPA-300.0	ND		1
Nitrate as N	1.5	mg/L	0.10	0.042	EPA-300.0	ND		1
Sulfate	48	mg/L	1.0	0.20	EPA-300.0	ND		1
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		2
Perchlorate	1.5	ug/L	4.0	0.76	EPA-314.0	ND	J	3
ortho-Phosphate as P	0.26	mg/L	0.050	0.017	EPA-365.1	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	10/25/19 08:00	10/25/19 14:12	MRC	IC1	1	B060501
2	EPA-353.2	10/25/19 08:04	10/25/19 08:04	MC1	KONE-1	1	B060622
3	EPA-314.0	11/09/19 12:00	11/10/19 20:03	SAV	IC6	1	B061767
4	EPA-365.1	10/25/19 07:32	10/25/19 07:44	MC1	SC-1	1	B060646

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Powell, OH 43065

**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936445-03	<b>Client Sample Name:</b> NASA/JPL, MW-16, 10/24/2019 10:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Chromium	16000	ug/L	60	10	EPA-200.8	ND	A07	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.8	10/28/19 09:20	10/28/19 16:10	AS1	PE-EL4	20	B060575

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Reported: 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-04	<b>Client Sample Name:</b> NASA/JPL, MW-1, 10/24/2019 12:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-04	<b>Client Sample Name:</b> NASA/JPL, MW-1, 10/24/2019 12:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-04	<b>Client Sample Name:</b> NASA/JPL, MW-1, 10/24/2019 12:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/29/19 07:00	10/29/19 08:14	MGC	MS-V5	1	B060690

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936445-04	<b>Client Sample Name:</b> NASA/JPL, MW-1, 10/24/2019 12:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/29/19 07:00	10/29/19 08:14	MGC	MS-V5	1	B060690

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936445-04	<b>Client Sample Name:</b> NASA/JPL, MW-1, 10/24/2019 12:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/09/19 12:00	11/10/19 18:47	SAV	IC6	1	B061767

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936445-04	<b>Client Sample Name:</b> NASA/JPL, MW-1, 10/24/2019 12:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.00020	0.000032	EPA-218.6	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 16:00	10/25/19 17:27		CMM	IC-4	1	B060652
2	EPA-200.8	10/28/19 09:20	10/28/19 15:48		AS1	PE-EL4	1	B060575

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-05	<b>Client Sample Name:</b> NASA/JPL, MW-9, 10/24/2019 1:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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**Reported:** 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-05	<b>Client Sample Name:</b> NASA/JPL, MW-9, 10/24/2019 1:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2)

<b>BCL Sample ID:</b> 1936445-05	<b>Client Sample Name:</b> NASA/JPL, MW-9, 10/24/2019 1:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/29/19 08:24	10/29/19 10:39	MGC	MS-V5	1	B060691

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

<b>BCL Sample ID:</b> 1936445-05	<b>Client Sample Name:</b> NASA/JPL, MW-9, 10/24/2019 1:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloroacetonitrile	0	ug/L			EPA-524.2	0		1
1-Chlorobutane	0	ug/L			EPA-524.2	0		1
1,1-Dichloropropanone	0	ug/L			EPA-524.2	0		1
Methyl acrylate	0	ug/L			EPA-524.2	0		1
Nitrobenzene	0	ug/L			EPA-524.2	0		1
2-Nitropropane	0	ug/L			EPA-524.2	0		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	10/29/19 08:24	10/29/19 10:39	MGC	MS-V5	1	B060691

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

<b>BCL Sample ID:</b> 1936445-05	<b>Client Sample Name:</b> NASA/JPL, MW-9, 10/24/2019 1:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.76	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/09/19 12:00	11/10/19 20:19	SAV	IC6	1	B061767

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

<b>BCL Sample ID:</b> 1936445-05	<b>Client Sample Name:</b> NASA/JPL, MW-9, 10/24/2019 1:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00038	mg/L	0.00020	0.000032	EPA-218.6	ND		1
<b>Total Recoverable Chromium</b>	<b>80</b>	<b>ug/L</b>	<b>3.0</b>	<b>0.50</b>	<b>EPA-200.8</b>	<b>ND</b>		<b>2</b>

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-218.6	10/25/19 20:00	10/25/19 20:30		CMM	IC-4	1	B060653
2	EPA-200.8	10/28/19 09:23	10/28/19 16:26		AS1	PE-EL4	1	B060576

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**Reported:** 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060690</b>						
Benzene	B060690-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B060690-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B060690-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B060690-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B060690-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B060690-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B060690-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B060690-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B060690-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B060690-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B060690-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B060690-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B060690-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B060690-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B060690-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B060690-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B060690-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B060690-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B060690-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B060690-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B060690-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B060690-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B060690-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B060690-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B060690-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B060690-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B060690-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B060690-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B060690-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B060690-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B060690-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B060690-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B060690-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B060690-BLK1	ND	ug/L	0.50	0.14	

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Reported: 11/12/2019 8:59  
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Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060690</b>						
trans-1,3-Dichloropropene	B060690-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B060690-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B060690-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B060690-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B060690-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B060690-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B060690-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B060690-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B060690-BLK1	ND	ug/L	0.50	0.12	
Styrene	B060690-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B060690-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B060690-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B060690-BLK1	ND	ug/L	0.50	0.23	
Toluene	B060690-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B060690-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B060690-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B060690-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B060690-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B060690-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B060690-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B060690-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B060690-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B060690-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B060690-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B060690-BLK1	ND	ug/L	0.50	0.18	
Acetone	B060690-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B060690-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B060690-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B060690-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B060690-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B060690-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B060690-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B060690-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B060690-BLK1	ND	ug/L	4.0	1.3	

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Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
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**QC Batch ID: B060690**

Ethyl t-butyl ether	B060690-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B060690-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B060690-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B060690-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B060690-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B060690-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B060690-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B060690-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B060690-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B060690-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B060690-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B060690-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B060690-BLK1	ND	ug/L	0.50	0.13	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>B060690-BLK1</b>	<b>99.4</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>B060690-BLK1</b>	<b>99.1</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>B060690-BLK1</b>	<b>104</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

**QC Batch ID: B060691**

Benzene	B060691-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B060691-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B060691-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B060691-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B060691-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B060691-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B060691-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B060691-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B060691-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B060691-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B060691-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B060691-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B060691-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B060691-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B060691-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B060691-BLK1	ND	ug/L	0.50	0.093	

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Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060691</b>						
Dibromochloromethane	B060691-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B060691-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B060691-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B060691-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B060691-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B060691-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B060691-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B060691-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B060691-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B060691-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B060691-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B060691-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B060691-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B060691-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B060691-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B060691-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B060691-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B060691-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B060691-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B060691-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B060691-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B060691-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B060691-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B060691-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B060691-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B060691-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B060691-BLK1	ND	ug/L	0.50	0.12	
Styrene	B060691-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B060691-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B060691-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B060691-BLK1	ND	ug/L	0.50	0.23	
Toluene	B060691-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B060691-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B060691-BLK1	ND	ug/L	0.50	0.15	

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Reported: 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060691</b>						
1,1,1-Trichloroethane	B060691-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B060691-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B060691-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B060691-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B060691-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B060691-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B060691-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B060691-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B060691-BLK1	ND	ug/L	0.50	0.18	
Acetone	B060691-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B060691-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B060691-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B060691-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B060691-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B060691-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B060691-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B060691-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B060691-BLK1	ND	ug/L	4.0	1.3	
Ethyl t-butyl ether	B060691-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B060691-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B060691-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B060691-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B060691-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B060691-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B060691-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B060691-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B060691-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B060691-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B060691-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B060691-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B060691-BLK1	ND	ug/L	0.50	0.13	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>B060691-BLK1</b>	<b>97.2</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>B060691-BLK1</b>	<b>102</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>B060691-BLK1</b>	<b>105</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

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Tidewater Inc.  
3761 Attucks Drive  
Powell, OH 43065

Reported: 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: B060690</b>										
Benzene	B060690-BS1	LCS	23.370	25.000	ug/L	93.5		70 - 130		
Bromodichloromethane	B060690-BS1	LCS	26.500	25.000	ug/L	106		70 - 130		
Chlorobenzene	B060690-BS1	LCS	23.870	25.000	ug/L	95.5		70 - 130		
Chloroethane	B060690-BS1	LCS	25.920	25.000	ug/L	104		70 - 130		
1,4-Dichlorobenzene	B060690-BS1	LCS	22.750	25.000	ug/L	91.0		70 - 130		
1,1-Dichloroethane	B060690-BS1	LCS	25.350	25.000	ug/L	101		70 - 130		
1,1-Dichloroethene	B060690-BS1	LCS	24.270	25.000	ug/L	97.1		70 - 130		
Toluene	B060690-BS1	LCS	21.960	25.000	ug/L	87.8		70 - 130		
Trichloroethene	B060690-BS1	LCS	24.010	25.000	ug/L	96.0		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B060690-BS1	LCS	10.480	10.000	ug/L	105		75 - 125		
Toluene-d8 (Surrogate)	B060690-BS1	LCS	10.280	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	B060690-BS1	LCS	10.500	10.000	ug/L	105		80 - 120		

<b>QC Batch ID: B060691</b>										
Benzene	B060691-BS1	LCS	22.910	25.000	ug/L	91.6		70 - 130		
Bromodichloromethane	B060691-BS1	LCS	27.570	25.000	ug/L	110		70 - 130		
Chlorobenzene	B060691-BS1	LCS	23.930	25.000	ug/L	95.7		70 - 130		
Chloroethane	B060691-BS1	LCS	26.050	25.000	ug/L	104		70 - 130		
1,4-Dichlorobenzene	B060691-BS1	LCS	23.760	25.000	ug/L	95.0		70 - 130		
1,1-Dichloroethane	B060691-BS1	LCS	25.390	25.000	ug/L	102		70 - 130		
1,1-Dichloroethene	B060691-BS1	LCS	24.890	25.000	ug/L	99.6		70 - 130		
Toluene	B060691-BS1	LCS	22.190	25.000	ug/L	88.8		70 - 130		
Trichloroethene	B060691-BS1	LCS	25.470	25.000	ug/L	102		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B060691-BS1	LCS	11.100	10.000	ug/L	111		75 - 125		
Toluene-d8 (Surrogate)	B060691-BS1	LCS	10.270	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	B060691-BS1	LCS	10.640	10.000	ug/L	106		80 - 120		

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Reported: 11/12/2019 8:59
Project: JPL- GW Monitoring Wells
Project Number: 4Q19
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Source Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC Batch ID: B060690 and Used client sample: Y - Description: MW-1, 10/24/2019 12:25.

Table with columns: Constituent, Source Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC Batch ID: B060691 and Used client sample: Y - Description: MW-9, 10/24/2019 13:25.

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

## Volatile Organic Analysis (EPA Method 524.2)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060691</b>		Used client sample: Y - Description: MW-9, 10/24/2019 13:25								
1,1-Dichloroethene	MS	1936445-05	ND	24.920	25.000	ug/L		99.7		70 - 130
	MSD	1936445-05	ND	26.050	25.000	ug/L	4.4	104	20	70 - 130
Toluene	MS	1936445-05	ND	22.720	25.000	ug/L		90.9		70 - 130
	MSD	1936445-05	ND	22.330	25.000	ug/L	1.7	89.3	20	70 - 130
Trichloroethene	MS	1936445-05	ND	25.230	25.000	ug/L		101		70 - 130
	MSD	1936445-05	ND	26.050	25.000	ug/L	3.2	104	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1936445-05	ND	10.720	10.000	ug/L		107		75 - 125
	MSD	1936445-05	ND	11.250	10.000	ug/L	4.8	112		75 - 125
Toluene-d8 (Surrogate)	MS	1936445-05	ND	10.350	10.000	ug/L		104		80 - 120
	MSD	1936445-05	ND	9.9400	10.000	ug/L	4.0	99.4		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1936445-05	ND	10.400	10.000	ug/L		104		80 - 120
	MSD	1936445-05	ND	10.010	10.000	ug/L	3.8	100		80 - 120

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**Reported:** 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Volatile Organic Analysis (EPA Method 524.2) TICs

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
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**QC Batch ID: B060690**

Chloroacetonitrile	B060690-BLK1	0	ug/L			
1-Chlorobutane	B060690-BLK1	0	ug/L			
1,1-Dichloropropanone	B060690-BLK1	0	ug/L			
Methyl acrylate	B060690-BLK1	0	ug/L			
Nitrobenzene	B060690-BLK1	0	ug/L			
2-Nitropropane	B060690-BLK1	0	ug/L			

**QC Batch ID: B060691**

Chloroacetonitrile	B060691-BLK1	0	ug/L			
1-Chlorobutane	B060691-BLK1	0	ug/L			
1,1-Dichloropropanone	B060691-BLK1	0	ug/L			
Methyl acrylate	B060691-BLK1	0	ug/L			
Nitrobenzene	B060691-BLK1	0	ug/L			
2-Nitropropane	B060691-BLK1	0	ug/L			

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060501</b>						
Chloride	B060501-BLK1	ND	mg/L	0.50	0.15	
Nitrate as N	B060501-BLK1	ND	mg/L	0.10	0.042	
Sulfate	B060501-BLK1	ND	mg/L	1.0	0.20	
<b>QC Batch ID: B060622</b>						
Nitrite as N	B060622-BLK1	ND	mg/L	0.050	0.010	
<b>QC Batch ID: B060646</b>						
ortho-Phosphate as P	B060646-BLK1	ND	mg/L	0.050	0.017	
<b>QC Batch ID: B061767</b>						
Perchlorate	B061767-BLK1	ND	ug/L	4.0	0.76	

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**Reported:** 11/12/2019 8:59  
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Project Number: 4Q19  
Project Manager: David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060501</b>										
Chloride	B060501-BS1	LCS	49.362	50.000	mg/L	98.7		90 - 110		
Nitrate as N	B060501-BS1	LCS	5.0000	5.0000	mg/L	100		90 - 110		
Sulfate	B060501-BS1	LCS	97.483	100.00	mg/L	97.5		90 - 110		
<b>QC Batch ID: B060622</b>										
Nitrite as N	B060622-BS1	LCS	0.49214	0.50000	mg/L	98.4		90 - 110		
<b>QC Batch ID: B060646</b>										
ortho-Phosphate as P	B060646-BS1	LCS	0.50490	0.50000	mg/L	101		90 - 110		
<b>QC Batch ID: B061767</b>										
Perchlorate	B061767-BS1	LCS	10.086	10.000	ug/L	101		85 - 115		

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Project Number: 4Q19  
Project Manager: David Conner

### Water Analysis (General Chemistry)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B060501</b>		Used client sample: N								
Chloride	DUP	1936397-01	118.26	118.37		mg/L	0.1		10	
	MS	1936397-01	118.26	166.87	50.505	mg/L		96.2		80 - 120
	MSD	1936397-01	118.26	167.42	50.505	mg/L	0.3	97.3	10	80 - 120
Nitrate as N	DUP	1936397-01	7.8650	7.8590		mg/L	0.1		10	
	MS	1936397-01	7.8650	12.745	5.0505	mg/L		96.6		80 - 120
	MSD	1936397-01	7.8650	12.695	5.0505	mg/L	0.4	95.6	10	80 - 120
Sulfate	DUP	1936397-01	82.704	82.371		mg/L	0.4		10	
	MS	1936397-01	82.704	187.68	101.01	mg/L		104		80 - 120
	MSD	1936397-01	82.704	187.83	101.01	mg/L	0.1	104	10	80 - 120
<b>QC Batch ID: B060622</b>		Used client sample: Y - Description: MW-13, 10/24/2019 16:05								
Nitrite as N	DUP	1936445-02	ND	ND		mg/L			10	
	MS	1936445-02	ND	0.54327	0.52632	mg/L		103		90 - 110
	MSD	1936445-02	ND	0.53812	0.52632	mg/L	1.0	102	10	90 - 110
<b>QC Batch ID: B060646</b>		Used client sample: N								
ortho-Phosphate as P	DUP	1936436-01	0.12040	0.12020		mg/L	0.2		10	
	MS	1936436-01	0.12040	0.65863	0.52632	mg/L		102		90 - 110
	MSD	1936436-01	0.12040	0.65116	0.52632	mg/L	1.1	101	10	90 - 110
<b>QC Batch ID: B061767</b>		Used client sample: Y - Description: MW-1, 10/24/2019 12:25								
Perchlorate	DUP	1936445-04	ND	ND		ug/L			15	
	MS	1936445-04	ND	8.2187	10.101	ug/L		81.4		80 - 120
	MSD	1936445-04	ND	8.2761	10.101	ug/L	0.7	81.9	15	80 - 120

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
**Project Number:** 4Q19  
**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: B060575</b>						
Total Recoverable Chromium	B060575-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B060576</b>						
Total Recoverable Chromium	B060576-BLK1	ND	ug/L	3.0	0.50	
<b>QC Batch ID: B060652</b>						
Hexavalent Chromium	B060652-BLK1	ND	mg/L	0.00020	0.000032	
<b>QC Batch ID: B060653</b>						
Hexavalent Chromium	B060653-BLK1	ND	mg/L	0.00020	0.000032	

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**Reported:** 11/12/2019 8:59  
Project: JPL- GW Monitoring Wells  
Project Number: 4Q19  
Project Manager: David Conner

### Metals Analysis

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: B060575</b>										
Total Recoverable Chromium	B060575-BS1	LCS	40.674	40.000	ug/L	102		85 - 115		
<b>QC Batch ID: B060576</b>										
Total Recoverable Chromium	B060576-BS1	LCS	41.265	40.000	ug/L	103		85 - 115		
<b>QC Batch ID: B060652</b>										
Hexavalent Chromium	B060652-BS1	LCS	0.020560	0.020000	mg/L	103		90 - 110		
<b>QC Batch ID: B060653</b>										
Hexavalent Chromium	B060653-BS1	LCS	0.019872	0.020000	mg/L	99.4		90 - 110		

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**Reported:** 11/12/2019 8:59  
**Project:** JPL- GW Monitoring Wells  
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**Project Manager:** David Conner

### Metals Analysis

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: B060575</b>		Used client sample: Y - Description: MW-1, 10/24/2019 12:25								
Total Recoverable Chromium	DUP	1936445-04	ND	ND		ug/L			20	
	MS	1936445-04	ND	40.848	40.000	ug/L		102		70 - 130
	MSD	1936445-04	ND	39.190	40.000	ug/L	4.1	98.0	20	70 - 130
<b>QC Batch ID: B060576</b>		Used client sample: Y - Description: MW-9, 10/24/2019 13:25								
Total Recoverable Chromium	DUP	1936445-05	79.604	91.629		ug/L	14.0		20	
	MS	1936445-05	79.604	133.35	40.000	ug/L		134		Q03
	MSD	1936445-05	79.604	139.60	40.000	ug/L	4.6	150	20	70 - 130 Q03
<b>QC Batch ID: B060652</b>		Used client sample: Y - Description: MW-1, 10/24/2019 12:25								
Hexavalent Chromium	DUP	1936445-04	ND	ND		mg/L			10	
	MS	1936445-04	ND	0.021484	0.020202	mg/L		106		90 - 110
	MSD	1936445-04	ND	0.021518	0.020202	mg/L	0.2	107	10	90 - 110
<b>QC Batch ID: B060653</b>		Used client sample: Y - Description: MW-9, 10/24/2019 13:25								
Hexavalent Chromium	DUP	1936445-05	0.00037700	0.00037500		mg/L	0.5		10	
	MS	1936445-05	0.00037700	0.022480	0.020202	mg/L		109		90 - 110
	MSD	1936445-05	0.00037700	0.022506	0.020202	mg/L	0.1	110	10	90 - 110

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**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit
- A07 Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) was(were) not within the control limits.