

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

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



Date of Report: 11/01/2018

David Conner

Tidewater Inc.

3761 Attucks Drive

Powell, OH 43065

Client Project: 4Q18

BCL Project: JPL- GW Monitoring Wells

BCL Work Order: 1832484

Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/15/2018. 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

Report To: Tidewater, Inc.
 Client: Tidewater, Inc.
 Attn: David Conner
 Street Address: 3761 Allucks Drive
 City: Powell State: OH Zip: 43065
 Phone: 626 1288 5715 Fax: 614 792 2897
 Email Address: david.conner@tdesh2o.net
 Submission #: 18-32484

Project Description: JPL-GW Monitoring
 Project Code: 4Q18
 Sampler (s): Blaine Tech

Page 1 of 2

Billing: Client: Tidewater, Inc.
 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

Sample #	Sample Description	Date	Time	Matrix*
1	TB-1-101518	10/15/18	0700	GW
2	MW-20-5		0800	GW
3	MW-20-4		0840	GW
4	MW-20-3		0915	GW
5	MW-20-2		1015	GW
6	MW-19-5		1145	GW
7	DWP-1-4018		1155	GW
8	MW-19-4		1250	GW
9	MW-19-3		1345	GW
10	MW-19-2		1410	GW
11	MW-19-1		1445	GW

CHK BY: JKA MA WJ
 Notes: SHORT HOLDING TIME
 DO Cl, BOD MBAS COT
 12/1/18

Analysis Requested:
 VOCs EPA 524.2
 Total Cr (200.8)
 Perchlorate (EPA 314.0)
 Chloride, Nitrate, Sulfate (300)
 Orthophosphate (365.1)
 Nitrite (353.2)
 Hexavalent Cr (7196)

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 Notified on C of C
 NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)

Cost Center:
 1. Relinquished By: _____ Date: 10/15/18 Time: 1515
 2. Relinquished By: _____ Date: 10/18/18 Time: 1415
 3. Relinquished By: _____ Date: 10/18/18 Time: 1415

Global ID: _____
 1. Received By: _____ Date: 10/15/18 Time: 1515
 2. Received By: _____ Date: 10/18/18 Time: 1415
 3. Received By: _____ Date: 10/18/18 Time: 1415

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 #: 1832484

SHIPPING INFORMATION
Fed Ex UPS Ontrao 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: 0.98 Container: 16 Thermometer ID: 208
Temperature: (A) 2.4 °C / (C) 2.1 °C

Date/Time: 10/15/15
Analyst Init: EAT

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE IMPRES		D	D	GH	D					
4oz / 8oz / 16oz PE IMPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		E	E	TJ	E				E	E
PT CYANIDE										
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		ABC	ABC	A? F	ABC	ABC	ABC	ABC	ABC	ABC
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 509/609/8080										
QT EPA 515/5150										
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 520										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: CO received broken
Sample Numbering Completed By: _____ Date/Time: 10/15/15

= Actual / C = Corrected

Rev 21 05/23/2016

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Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC LABORATORIES INC.		COOLER RECEIPT FORM		Page <u>2</u> Of <u>2</u>						
Submission #: <u>18-32484</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 checked="" type="checkbox"/> NO <input type="checkbox"/> <u>W / S</u>					
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments: _____										
Custody Seals None <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 type="checkbox"/> No <input type="checkbox"/>										
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.08</u> Container: <u>16</u> Thermometer ID: <u>208</u>		Date/Time <u>10/15/15</u>						
		Temperature: (A) <u>3.4</u> °C / (C) <u>3.1</u> °C		Analyst Init <u>EAH</u>						
SAMPLE CONTAINERS		SAMPLE NUMBERS								
QT PE UNPRES		<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>				
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		<u>E</u>	<u>E</u>	<u>E</u>	<u>E</u>	<u>E</u>	<u>E</u>			
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>A</u>		<u>AB</u>	<u>AC</u>	<u>AB</u>	<u>BC</u>	<u>AC</u>		
QT EPA 1664		<u>68</u>								
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 5080100000										
QT EPA 516.18150										
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 520										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLURRY										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										
Comments: _____										
Sample Numbering Completed By: <u>[Signature]</u> Date/Time: <u>10/15/15</u>										
= Actual / C = Corrected										

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832484-01	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: TB-1-101518 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 07:00 Sample Depth: --- Lab Matrix: Water Sample Type: Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-1-101518 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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1832484-02	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-20-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 08:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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1832484-03	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-20-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 08:40 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832484-04	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-20-3 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 09:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-20-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1832484-05	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-20-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 10:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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1832484-06	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-19-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 11:45 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832484-07	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: DUP-1-4Q18 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 11:55 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-1-4Q18 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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1832484-08	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-19-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 12:50 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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1832484-09	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-19-3 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 13:45 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832484-10	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-19-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 14:10 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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1832484-11	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-19-1 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 14:45 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-19-1 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1832484-12	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: EB-1-101518 Sampled By: Blaine Tech of BTST	Receive Date: 10/15/2018 19:15 Sampling Date: 10/15/2018 13:10 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-1-101518 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832484-13	COC Number: ---	Receive Date: 10/15/2018 19:15
	Project Number: NASA/JPL	Sampling Date: 10/15/2018 13:15
	Sampling Location: ---	Sample Depth: ---
	Sampling Point: SB-1-101518	Lab Matrix: Water
	Sampled By: Blaine Tech of BTST	Sample Type: Groundwater
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): SB-1-101518
		Matrix: WG
		Sample QC Type (SACode): CS
		Cooler ID:

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-01	Client Sample Name: NASA/JPL, TB-1-101518, 10/15/2018 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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3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-01	Client Sample Name: NASA/JPL, TB-1-101518, 10/15/2018 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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-01	Client Sample Name: NASA/JPL, TB-1-101518, 10/15/2018 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)	88.2	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.6	%	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	10/21/18 07:00	10/21/18 10:34	MGC	MS-V5	1	B027891

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-01	Client Sample Name: NASA/JPL, TB-1-101518, 10/15/2018 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	10/21/18 07:00	10/21/18 10:34	MGC	MS-V5	1	B027891

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-02 Client Sample Name: NASA/JPL, MW-20-5, 10/15/2018 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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3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1832484-02) and Client Sample Name (NASA/JPL, MW-20-5, 10/15/2018 8:00:00AM, Blaine Tech)

Main data table with 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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-02 **Client Sample Name:** NASA/JPL, MW-20-5, 10/15/2018 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)	88.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.9	%	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	10/21/18 07:00	10/21/18 10:57	MGC	MS-V5	1	B027891

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-02	Client Sample Name: NASA/JPL, MW-20-5, 10/15/2018 8:00:00AM, 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	10/21/18 07:00	10/21/18 10:57	MGC	MS-V5	1	B027891

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-02	Client Sample Name: NASA/JPL, MW-20-5, 10/15/2018 8:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 02:21	SAV	IC6	1	B028077

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Tidewater Inc.
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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-02	Client Sample Name: NASA/JPL, MW-20-5, 10/15/2018 8:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/15/18 20:08	10/15/18 20:09		MIG	KONE-1	1	B027769
2	EPA-200.8	10/19/18 08:30	10/19/18 19:17		ARD	PE-EL2	1	B027814

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-03	Client Sample Name: NASA/JPL, MW-20-4, 10/15/2018 8:40:00AM, 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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-03	Client Sample Name: NASA/JPL, MW-20-4, 10/15/2018 8:40:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-03 **Client Sample Name:** NASA/JPL, MW-20-4, 10/15/2018 8:40:00AM, 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)	83.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.1	%	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	10/21/18 07:00	10/21/18 11:20	MGC	MS-V5	1	B027891

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-03	Client Sample Name: NASA/JPL, MW-20-4, 10/15/2018 8:40:00AM, 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	10/21/18 07:00	10/21/18 11:20	MGC	MS-V5	1	B027891

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-03	Client Sample Name: NASA/JPL, MW-20-4, 10/15/2018 8:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 02:36	SAV	IC6	1	B028077

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-03	Client Sample Name: NASA/JPL, MW-20-4, 10/15/2018 8:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/15/18 20:08	10/15/18 20:09	MC1	KONE-1	1	B027769
2	EPA-200.8	10/19/18 08:30	10/19/18 19:20	ARD	PE-EL2	1	B027814

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-04	Client Sample Name: NASA/JPL, MW-20-3, 10/15/2018 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		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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-04 Client Sample Name: NASA/JPL, MW-20-3, 10/15/2018 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	0.15	ug/L	0.50	0.15	EPA-524.2	ND	J	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	0.39	ug/L	0.50	0.12	EPA-524.2	ND	J	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	1.9	ug/L	5.0	1.5	EPA-524.2	ND	J	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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-04	Client Sample Name: NASA/JPL, MW-20-3, 10/15/2018 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		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)	83.4	%	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	10/21/18 07:00	10/21/18 10:10	MGC	MS-V5	1	B027891

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-04	Client Sample Name: NASA/JPL, MW-20-3, 10/15/2018 9:15:00AM, 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	10/21/18 07:00	10/21/18 10:10	MGC	MS-V5	1	B027891

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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-04	Client Sample Name: NASA/JPL, MW-20-3, 10/15/2018 9:15:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 02:51	SAV	IC6	1	B028077

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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-04	Client Sample Name: NASA/JPL, MW-20-3, 10/15/2018 9:15:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/15/18 20:08	10/15/18 20:50		MIG	KONE-1	1	B027769
2	EPA-200.8	10/19/18 08:30	10/19/18 18:48		ARD	PE-EL2	1	B027814

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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-05 Client Sample Name: NASA/JPL, MW-20-2, 10/15/2018 10:15:00AM, 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		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	0.22	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-05	Client Sample Name: NASA/JPL, MW-20-2, 10/15/2018 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	0.30	ug/L	0.50	0.19	EPA-524.2	ND	J	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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-05	Client Sample Name: NASA/JPL, MW-20-2, 10/15/2018 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)	88.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	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	10/21/18 07:00	10/21/18 11:43	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-05	Client Sample Name: NASA/JPL, MW-20-2, 10/15/2018 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	10/21/18 07:00	10/21/18 11:43	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-05	Client Sample Name: NASA/JPL, MW-20-2, 10/15/2018 10:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.0	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 04:23	SAV	IC6	1	B028077

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-05	Client Sample Name: NASA/JPL, MW-20-2, 10/15/2018 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	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/15/18 20:08	10/15/18 20:09	MIG	KONE-1	1	B027769
2	EPA-200.8	10/19/18 08:30	10/19/18 19:24	ARD	PE-EL2	1	B027814

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-06 Client Sample Name: NASA/JPL, MW-19-5, 10/15/2018 11:45:00AM, 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	0.24	ug/L	0.50	0.20	EPA-524.2	ND	J	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	2.1	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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-06	Client Sample Name: NASA/JPL, MW-19-5, 10/15/2018 11:45:00AM, 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
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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-06	Client Sample Name: NASA/JPL, MW-19-5, 10/15/2018 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		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)	83.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.8	%	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	10/21/18 07:00	10/21/18 12:06	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-06	Client Sample Name: NASA/JPL, MW-19-5, 10/15/2018 11:45:00AM, 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	10/21/18 07:00	10/21/18 12:06	MGC	MS-V5	1	B027891

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-06	Client Sample Name: NASA/JPL, MW-19-5, 10/15/2018 11:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.9	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 04:39	SAV	IC6	1	B028077

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-06	Client Sample Name: NASA/JPL, MW-19-5, 10/15/2018 11:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0024	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.9	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/15/18 20:08	10/15/18 20:09	MIG	KONE-1	1	B027769
2	EPA-200.8	10/19/18 08:30	10/19/18 19:27	ARD	PE-EL2	1	B027814

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-07	Client Sample Name: NASA/JPL, DUP-1-4Q18, 10/15/2018 11:55:00AM, 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	0.24	ug/L	0.50	0.20	EPA-524.2	ND	J	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	2.0	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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-07	Client Sample Name: NASA/JPL, DUP-1-4Q18, 10/15/2018 11:55:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-07	Client Sample Name: NASA/JPL, DUP-1-4Q18, 10/15/2018 11:55:00AM, 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)	87.0	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	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	10/21/18 07:00	10/21/18 12:29	MGC	MS-V5	1	B027891

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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-07	Client Sample Name: NASA/JPL, DUP-1-4Q18, 10/15/2018 11:55:00AM, 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	10/21/18 07:00	10/21/18 12:29	MGC	MS-V5	1	B027891

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-07	Client Sample Name: NASA/JPL, DUP-1-4Q18, 10/15/2018 11:55:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.9	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 04:54	SAV	IC6	1	B028077

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-07	Client Sample Name: NASA/JPL, DUP-1-4Q18, 10/15/2018 11:55:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0027	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.8	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/15/18 20:08	10/15/18 20:15	MIG	KONE-1	1	B027769
2	EPA-200.8	10/19/18 08:30	10/19/18 19:31	ARD	PE-EL2	1	B027814

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-08	Client Sample Name: NASA/JPL, MW-19-4, 10/15/2018 12:50:00PM, 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
Chloroform	0.35	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-08	Client Sample Name: NASA/JPL, MW-19-4, 10/15/2018 12:50:00PM, 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
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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-08	Client Sample Name: NASA/JPL, MW-19-4, 10/15/2018 12:50:00PM, 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)	85.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	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	10/21/18 07:00	10/21/18 12:53	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-08	Client Sample Name: NASA/JPL, MW-19-4, 10/15/2018 12:50:00PM, 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	10/21/18 07:00	10/21/18 12:53	MGC	MS-V5	1	B027891

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-08	Client Sample Name: NASA/JPL, MW-19-4, 10/15/2018 12:50:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.9	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 05:09	SAV	IC6	1	B028077

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-08	Client Sample Name: NASA/JPL, MW-19-4, 10/15/2018 12:50:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0025	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	2.1	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/15/18 20:08	10/15/18 20:15	MIG	KONE-1	1	B027769
2	EPA-200.8	10/19/18 08:30	10/19/18 19:34	ARD	PE-EL2	1	B027814

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-09	Client Sample Name: NASA/JPL, MW-19-3, 10/15/2018 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	1.7	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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-09 **Client Sample Name:** NASA/JPL, MW-19-3, 10/15/2018 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	0.34	ug/L	0.50	0.23	EPA-524.2	ND	J	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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-09	Client Sample Name: NASA/JPL, MW-19-3, 10/15/2018 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)	85.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.8	%	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	10/21/18 07:00	10/21/18 13:16	MGC	MS-V5	1	B027891

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-09	Client Sample Name: NASA/JPL, MW-19-3, 10/15/2018 1:45:00PM, 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	10/21/18 07:00	10/21/18 13:16	MGC	MS-V5	1	B027891

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-09	Client Sample Name: NASA/JPL, MW-19-3, 10/15/2018 1:45:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.2	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 05:25	SAV	IC6	1	B028077

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Tidewater Inc.
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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-09	Client Sample Name: NASA/JPL, MW-19-3, 10/15/2018 1:45:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	3.2	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/15/18 20:08	10/15/18 20:15	MIG	KONE-1	1	B027769
2	EPA-200.8	10/19/18 08:30	10/19/18 19:38	ARD	PE-EL2	1	B027814

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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-10	Client Sample Name: NASA/JPL, MW-19-2, 10/15/2018 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
Chloroform	1.7	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	0.32	ug/L	0.50	0.27	EPA-524.2	ND	J	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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-10	Client Sample Name: NASA/JPL, MW-19-2, 10/15/2018 2:10:00PM, 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	1.3	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	0.78	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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-10	Client Sample Name: NASA/JPL, MW-19-2, 10/15/2018 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)	86.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.7	%	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	10/21/18 07:00	10/21/18 13:39	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-10	Client Sample Name: NASA/JPL, MW-19-2, 10/15/2018 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	10/21/18 07:00	10/21/18 13:39	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-10	Client Sample Name: NASA/JPL, MW-19-2, 10/15/2018 2:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.6	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 05:40	SAV	IC6	1	B028077

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-10	Client Sample Name: NASA/JPL, MW-19-2, 10/15/2018 2:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	2.8	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/15/18 20:08	10/15/18 20:15	MIG	KONE-1	1	B027769
2	EPA-200.8	10/19/18 08:30	10/19/18 19:41	ARD	PE-EL2	1	B027814

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-11	Client Sample Name: NASA/JPL, MW-19-1, 10/15/2018 2:45:00PM, 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	2.4	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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-11 Client Sample Name: NASA/JPL, MW-19-1, 10/15/2018 2:45:00PM, 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	0.74	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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-11	Client Sample Name: NASA/JPL, MW-19-1, 10/15/2018 2:45:00PM, 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)	85.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	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	10/21/18 07:00	10/21/18 14:02	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-11	Client Sample Name: NASA/JPL, MW-19-1, 10/15/2018 2:45:00PM, 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	10/21/18 07:00	10/21/18 14:02	MGC	MS-V5	1	B027891

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Tidewater Inc.
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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-11	Client Sample Name: NASA/JPL, MW-19-1, 10/15/2018 2:45:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 05:55	SAV	IC6	1	B028077

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Tidewater Inc.
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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-11	Client Sample Name: NASA/JPL, MW-19-1, 10/15/2018 2:45:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/15/18 20:08	10/15/18 20:15		MIG	KONE-1	1	B027771
2	EPA-200.8	10/19/18 08:30	10/19/18 19:45		ARD	PE-EL2	1	B027814

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-12 Client Sample Name: NASA/JPL, EB-1-101518, 10/15/2018 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
Chloroform	0.25	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1832484-12) and Client Sample Name (NASA/JPL, EB-1-101518, 10/15/2018 1:10:00PM, Blaine Tech)

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

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-12	Client Sample Name: NASA/JPL, EB-1-101518, 10/15/2018 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		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)	83.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.4	%	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	10/21/18 07:00	10/21/18 14:25	MGC	MS-V5	1	B027891

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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-12	Client Sample Name: NASA/JPL, EB-1-101518, 10/15/2018 1:10:00PM, 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	10/21/18 07:00	10/21/18 14:25	MGC	MS-V5	1	B027891

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-12	Client Sample Name: NASA/JPL, EB-1-101518, 10/15/2018 1:10:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 06:11	SAV	IC6	1	B028077

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-12	Client Sample Name: NASA/JPL, EB-1-101518, 10/15/2018 1:10:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	0.77	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-7196	10/15/18 20:08	10/15/18 20:16		MIG	KONE-1	1	B027771
2	EPA-200.8	10/19/18 12:00	10/26/18 10:50		JNC	PE-EL3	1	B027818

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-13	Client Sample Name: NASA/JPL, SB-1-101518, 10/15/2018 1:15:00PM, 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	0.21	ug/L	0.50	0.14	EPA-524.2	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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-13	Client Sample Name: NASA/JPL, SB-1-101518, 10/15/2018 1:15:00PM, 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: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832484-13	Client Sample Name: NASA/JPL, SB-1-101518, 10/15/2018 1:15:00PM, 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)	88.6	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.5	%	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	10/21/18 07:00	10/21/18 14:48	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832484-13	Client Sample Name: NASA/JPL, SB-1-101518, 10/15/2018 1:15:00PM, 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	10/21/18 07:00	10/21/18 14:48	MGC	MS-V5	1	B027891

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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832484-13	Client Sample Name: NASA/JPL, SB-1-101518, 10/15/2018 1:15:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/23/18 00:10	10/23/18 06:26	SAV	IC6	1	B028077

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832484-13	Client Sample Name: NASA/JPL, SB-1-101518, 10/15/2018 1:15:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	0.62	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-7196	10/15/18 20:08	10/15/18 20:16		MIG	KONE-1	1	B027771
2	EPA-200.8	10/19/18 12:00	10/26/18 10:54		JNC	PE-EL3	1	B027818

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027891						
Benzene	B027891-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B027891-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B027891-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B027891-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B027891-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B027891-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B027891-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B027891-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B027891-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B027891-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B027891-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B027891-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B027891-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B027891-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B027891-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B027891-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B027891-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B027891-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B027891-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B027891-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B027891-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B027891-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B027891-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B027891-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B027891-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B027891-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B027891-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B027891-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B027891-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B027891-BLK1	ND	ug/L	0.50	0.14	

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027891						
trans-1,3-Dichloropropene	B027891-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B027891-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B027891-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B027891-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B027891-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B027891-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B027891-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B027891-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B027891-BLK1	ND	ug/L	0.50	0.12	
Styrene	B027891-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B027891-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B027891-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B027891-BLK1	ND	ug/L	0.50	0.23	
Toluene	B027891-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B027891-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B027891-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B027891-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B027891-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B027891-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B027891-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B027891-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B027891-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B027891-BLK1	ND	ug/L	0.50	0.18	
Acetone	B027891-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B027891-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B027891-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B027891-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B027891-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B027891-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B027891-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B027891-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B027891-BLK1	ND	ug/L	4.0	1.3	

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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027891						
Ethyl t-butyl ether	B027891-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B027891-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B027891-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B027891-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B027891-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B027891-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B027891-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B027891-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B027891-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B027891-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B027891-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B027891-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B027891-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B027891-BLK1	85.8	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B027891-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B027891-BLK1	101	%	80 - 120 (LCL - UCL)		

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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		
QC Batch ID: B027891											
Benzene	B027891-BS1	LCS	25.320	25.000	ug/L	101		70 - 130			
Bromodichloromethane	B027891-BS1	LCS	25.390	25.000	ug/L	102		70 - 130			
Chlorobenzene	B027891-BS1	LCS	23.420	25.000	ug/L	93.7		70 - 130			
Chloroethane	B027891-BS1	LCS	29.010	25.000	ug/L	116		70 - 130			
1,4-Dichlorobenzene	B027891-BS1	LCS	22.770	25.000	ug/L	91.1		70 - 130			
1,1-Dichloroethane	B027891-BS1	LCS	28.000	25.000	ug/L	112		70 - 130			
1,1-Dichloroethene	B027891-BS1	LCS	26.160	25.000	ug/L	105		70 - 130			
Toluene	B027891-BS1	LCS	24.430	25.000	ug/L	97.7		70 - 130			
Trichloroethene	B027891-BS1	LCS	24.020	25.000	ug/L	96.1		70 - 130			
1,2-Dichloroethane-d4 (Surrogate)	B027891-BS1	LCS	8.2600	10.000	ug/L	82.6		75 - 125			
Toluene-d8 (Surrogate)	B027891-BS1	LCS	10.130	10.000	ug/L	101		80 - 120			
4-Bromofluorobenzene (Surrogate)	B027891-BS1	LCS	10.020	10.000	ug/L	100		80 - 120			

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027891		Used client sample: Y - Description: MW-20-3, 10/15/2018 09:15								
Benzene	MS	1832484-04	ND	25.760	25.000	ug/L		103		70 - 130
	MSD	1832484-04	ND	26.640	25.000	ug/L	3.4	107	20	70 - 130
Bromodichloromethane	MS	1832484-04	ND	25.640	25.000	ug/L		103		70 - 130
	MSD	1832484-04	ND	26.030	25.000	ug/L	1.5	104	20	70 - 130
Chlorobenzene	MS	1832484-04	ND	24.150	25.000	ug/L		96.6		70 - 130
	MSD	1832484-04	ND	24.400	25.000	ug/L	1.0	97.6	20	70 - 130
Chloroethane	MS	1832484-04	ND	28.750	25.000	ug/L		115		70 - 130
	MSD	1832484-04	ND	29.360	25.000	ug/L	2.1	117	20	70 - 130
1,4-Dichlorobenzene	MS	1832484-04	ND	23.540	25.000	ug/L		94.2		70 - 130
	MSD	1832484-04	ND	24.330	25.000	ug/L	3.3	97.3	20	70 - 130
1,1-Dichloroethane	MS	1832484-04	ND	28.560	25.000	ug/L		114		70 - 130
	MSD	1832484-04	ND	29.060	25.000	ug/L	1.7	116	20	70 - 130
1,1-Dichloroethene	MS	1832484-04	ND	27.100	25.000	ug/L		108		70 - 130
	MSD	1832484-04	ND	27.370	25.000	ug/L	1.0	109	20	70 - 130
Toluene	MS	1832484-04	ND	24.840	25.000	ug/L		99.4		70 - 130
	MSD	1832484-04	ND	25.160	25.000	ug/L	1.3	101	20	70 - 130
Trichloroethene	MS	1832484-04	ND	24.170	25.000	ug/L		96.7		70 - 130
	MSD	1832484-04	ND	24.620	25.000	ug/L	1.8	98.5	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1832484-04	ND	8.2800	10.000	ug/L		82.8		75 - 125
	MSD	1832484-04	ND	8.0300	10.000	ug/L	3.1	80.3		75 - 125
Toluene-d8 (Surrogate)	MS	1832484-04	ND	9.9800	10.000	ug/L		99.8		80 - 120
	MSD	1832484-04	ND	10.200	10.000	ug/L	2.2	102		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1832484-04	ND	9.5900	10.000	ug/L		95.9		80 - 120
	MSD	1832484-04	ND	9.7000	10.000	ug/L	1.1	97.0		80 - 120

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027891						
Chloroacetonitrile	B027891-BLK1	0	ug/L			
1-Chlorobutane	B027891-BLK1	0	ug/L			
1,1-Dichloropropanone	B027891-BLK1	0	ug/L			
Methyl acrylate	B027891-BLK1	0	ug/L			
Nitrobenzene	B027891-BLK1	0	ug/L			
2-Nitropropane	B027891-BLK1	0	ug/L			

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028077						
Perchlorate	B028077-BLK1	ND	ug/L	4.0	0.92	

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Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028077										
Perchlorate	B028077-BS1	LCS	8.9760	10.000	ug/L	89.8		85 - 115		

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028077		Used client sample: Y - Description: MW-20-3, 10/15/2018 09:15								
Perchlorate	DUP	1832484-04	ND	ND		ug/L				15
	MS	1832484-04	ND	11.232	10.101	ug/L		111		80 - 120
	MSD	1832484-04	ND	11.133	10.101	ug/L	0.9	110	15	80 - 120

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Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B027769						
Hexavalent Chromium	B027769-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B027771						
Hexavalent Chromium	B027771-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B027814						
Total Recoverable Chromium	B027814-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B027818						
Total Recoverable Chromium	B027818-BLK2	ND	ug/L	3.0	0.50	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027769										
Hexavalent Chromium	B027769-BS1	LCS	0.051565	0.050000	mg/L	103		85 - 115		
QC Batch ID: B027771										
Hexavalent Chromium	B027771-BS1	LCS	0.052092	0.050000	mg/L	104		85 - 115		
QC Batch ID: B027814										
Total Recoverable Chromium	B027814-BS1	LCS	38.585	40.000	ug/L	96.5		85 - 115		
QC Batch ID: B027818										
Total Recoverable Chromium	B027818-BS2	LCS	41.517	40.000	ug/L	104		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027769		Used client sample: Y - Description: MW-20-3, 10/15/2018 09:15								
Hexavalent Chromium	DUP	1832484-04	ND	ND		mg/L			10	
	MS	1832484-04	ND	0.052305	0.052632	mg/L		99.4		85 - 115
	MSD	1832484-04	ND	0.051635	0.052632	mg/L	1.3	98.1	10	85 - 115
QC Batch ID: B027771		Used client sample: Y - Description: MW-19-1, 10/15/2018 14:45								
Hexavalent Chromium	DUP	1832484-11	ND	ND		mg/L			10	
	MS	1832484-11	ND	0.054972	0.052632	mg/L		104		85 - 115
	MSD	1832484-11	ND	0.054717	0.052632	mg/L	0.5	104	10	85 - 115
QC Batch ID: B027814		Used client sample: Y - Description: MW-20-3, 10/15/2018 09:15								
Total Recoverable Chromium	DUP	1832484-04	ND	ND		ug/L			20	
	MS	1832484-04	ND	35.198	40.000	ug/L		88.0		70 - 130
	MSD	1832484-04	ND	38.144	40.000	ug/L	8.0	95.4	20	70 - 130
QC Batch ID: B027818		Used client sample: N								
Total Recoverable Chromium	DUP	1832657-01	ND	ND		ug/L			20	
	MS	1832657-01	ND	47.800	40.000	ug/L		120		70 - 130 J
	MSD	1832657-01	ND	46.440	40.000	ug/L	2.9	116	20	70 - 130 J

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 10:11
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 11/02/2018

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 4Q18
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1832621
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/16/2018. 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

Required Fields

Report To: Tidewater, Inc.
 Client: Tidewater, Inc.
 Attn: David Comer
 Street Address: 3761 Allucks Drive
 City: Powell State: OH Zip: 43065
 Phone: 626 298 5715 Fax: 614 792 2897
 Email Address: david.comer@tish20.net
 Submission #: 18-32621

Project Description: JPL-GW Monitoring
 Project Code: 4Q18
 Sampler(s): Blaine Tech

Sample #	Sample Description	Date	Time	Matrix*
-1	TB-2-101618	10/16/18	0700	GW
-2	MW-14-5		0735	GW
-3	MW-14-4		0815	GW
-4	MW-14-3		0900	GW
-5	MW-14-2		0920	GW
-6	MW-25-5		1100	GW
-7	MW-25-4		1135	GW
-8	MW-25-3		1215	GW
-9	MW-25-2		1300	GW
-10	MW-25-1		1330	GW
-11	EB-2-101618		1425	GW

Analysis Requested

Analysis	Requested
VOCs EPA 524.2	X
Total Cr (200.8)	X
Perchlorate (EPA 314.0)	X
Chloride, Nitrate, Sulfate (300)	X
Orthophosphate (365.1)	X
Nitrite (353.2)	X
Hexavalent Cr (7196)	X

Billing
 Client: Tidewater, Inc.
 Attn: David Comer
 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

CHK RV: Standard Turnaround + 10 LOM
 NOTES: MS/MSD
 SUB-OUT: MS/MSD
 HOLDING TIME: 96 HOURS
 NO₃ OF SS
 NO₂ OF SS
 ROD MBAS COT
 MS/MSD
 Level IV

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 Notified on C of C
 NOTE: ALL ANALYSIS REQUIRED TO HAVE CALIBRATION SUMMARIES (Inform QC)

Cost Center:
 Global ID#
 1. Relinquished By: [Signature] Date: 10/16/18 Time: 1410
 2. Relinquished By: [Signature] Date: 10-16-18 Time: 1800
 3. Relinquished By: [Signature] Date: 10-16-18 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 3

Submission #: 18-32621

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 / 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: 0.98 Container: PE Thermometer ID: 208 Date/Time: 10/16 1800

Temperature: (A) 3.8 °C / (C) 3.5 °C Analyst Init: EANC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES				1	0	0	0	64	0	
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz				←	←	←	←	27	←	
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 508/509/5080										
QT EPA 515/5150										
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 SI.EVE										
PCH VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: GSR Date/Time: 10/16 1830

Actual / C = Corrected

Rev 21 05/23/2016

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 3

Submission #: 18-32621

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: 10/16/2000

Temperature: (A) 1.6 °C (C) 1.3 °C Analyst Init: ENL

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES		D	GH						D	D
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		E	JJ						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	A>F	ABC	ABC	ABC	ABC	A>F	ABC	ABC
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 508/509/5090										
QT EPA 515.18150										
QT EPA 515										
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										
TEFLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: GSJ Date/Time: 10/16/2000

1 = Actual / C = Corrected

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 of 3

Submission #: 1832621

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 / 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: 0.90 Container: VOA Thermometer ID: 208 Date/Time: 10/16 1800

Temperature: (A) 1.6 °C / (C) 1.3 °C Analyst Init: ENL

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PR UNPRES										
2oz Cr ⁶										
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									
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 504/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz HPA 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: CSF Date/Time: 10/16 1830

Actual / C = Corrected

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832621-01	COC Number: --- Project Number: JPL-GW Sampling Location: --- Sampling Point: TB-2-101618 Sampled By: Blaine Tech of BTST	Receive Date: 10/16/2018 18:00 Sampling Date: 10/16/2018 07:00 Sample Depth: --- Lab Matrix: Water Sample Type: Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-2-101618 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1832621-02	COC Number: --- Project Number: JPL-GW Sampling Location: --- Sampling Point: MW-14-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/16/2018 18:00 Sampling Date: 10/16/2018 07:35 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-14-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1832621-03	COC Number: --- Project Number: JPL-GW Sampling Location: --- Sampling Point: MW-14-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/16/2018 18:00 Sampling Date: 10/16/2018 08:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-14-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832621-04	COC Number: --- Project Number: JPL-GW Sampling Location: --- Sampling Point: MW-14-3 Sampled By: Blaine Tech of BTST	Receive Date: 10/16/2018 18:00 Sampling Date: 10/16/2018 09:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-14-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1832621-05	COC Number: --- Project Number: JPL-GW Sampling Location: --- Sampling Point: MW-14-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/16/2018 18:00 Sampling Date: 10/16/2018 09:20 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-14-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1832621-06	COC Number: --- Project Number: JPL-GW Sampling Location: --- Sampling Point: MW-25-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/16/2018 18:00 Sampling Date: 10/16/2018 11:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-25-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832621-07	COC Number: --- Project Number: JPL-GW Sampling Location: --- Sampling Point: MW-25-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/16/2018 18:00 Sampling Date: 10/16/2018 11:35 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-25-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1832621-08	COC Number: --- Project Number: JPL-GW Sampling Location: --- Sampling Point: MW-25-3 Sampled By: Blaine Tech of BTST	Receive Date: 10/16/2018 18:00 Sampling Date: 10/16/2018 12:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-25-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1832621-09	COC Number: --- Project Number: JPL-GW Sampling Location: --- Sampling Point: MW-25-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/16/2018 18:00 Sampling Date: 10/16/2018 13:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-25-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832621-10	COC Number: --- Project Number: JPL-GW Sampling Location: --- Sampling Point: MW-25-1 Sampled By: Blaine Tech of BTST	Receive Date: 10/16/2018 18:00 Sampling Date: 10/16/2018 13:30 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-25-1 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1832621-11	COC Number: --- Project Number: JPL-GW Sampling Location: --- Sampling Point: EB-2-101618 Sampled By: Blaine Tech of BTST	Receive Date: 10/16/2018 18:00 Sampling Date: 10/16/2018 12:25 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-2-101618 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-01	Client Sample Name: JPL-GW, TB-2-101618, 10/16/2018 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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-01	Client Sample Name: JPL-GW, TB-2-101618, 10/16/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-01	Client Sample Name: JPL-GW, TB-2-101618, 10/16/2018 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)	89.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.5	%	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	10/21/18 08:44	10/21/18 19:26	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832621-01	Client Sample Name: JPL-GW, TB-2-101618, 10/16/2018 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	10/21/18 08:44	10/21/18 19:26	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-02	Client Sample Name: JPL-GW, MW-14-5, 10/16/2018 7:35:00AM, 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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-02		Client Sample Name: JPL-GW, MW-14-5, 10/16/2018 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	0.17	ug/L	0.50	0.12	EPA-524.2	ND	J	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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-02	Client Sample Name: JPL-GW, MW-14-5, 10/16/2018 7:35:00AM, 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)	90.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	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	10/21/18 08:44	10/21/18 19:49	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832621-02	Client Sample Name: JPL-GW, MW-14-5, 10/16/2018 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	10/21/18 08:44	10/21/18 19:49	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832621-02	Client Sample Name: JPL-GW, MW-14-5, 10/16/2018 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	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 13:37	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832621-02	Client Sample Name: JPL-GW, MW-14-5, 10/16/2018 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	0.0020	0.00070	EPA-7196	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-7196	10/17/18 07:04	10/17/18 07:04	MC1	KONE-1	1	B027773
2	EPA-200.8	10/24/18 09:00	10/24/18 17:56	ARD	PE-EL4	1	B028185

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Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-03	Client Sample Name: JPL-GW, MW-14-4, 10/16/2018 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		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	0.21	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-03	Client Sample Name: JPL-GW, MW-14-4, 10/16/2018 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	0.20	ug/L	0.50	0.19	EPA-524.2	ND	J	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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-03	Client Sample Name: JPL-GW, MW-14-4, 10/16/2018 8:15:00AM, 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)	87.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.0	%	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	10/21/18 08:44	10/21/18 15:35	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832621-03	Client Sample Name: JPL-GW, MW-14-4, 10/16/2018 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	10/21/18 08:44	10/21/18 15:35	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832621-03	Client Sample Name: JPL-GW, MW-14-4, 10/16/2018 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	4.2	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 13:53	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832621-03	Client Sample Name: JPL-GW, MW-14-4, 10/16/2018 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0024	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.7	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/17/18 07:04	10/17/18 07:22	MC1	KONE-1	1	B027773
2	EPA-200.8	10/24/18 09:00	10/24/18 18:31	ARD	PE-EL4	1	B028185

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Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-04	Client Sample Name: JPL-GW, MW-14-3, 10/16/2018 9:00:00AM, 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	0.42	ug/L	0.50	0.14	EPA-524.2	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	0.34	ug/L	0.50	0.15	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-04	Client Sample Name: JPL-GW, MW-14-3, 10/16/2018 9:00:00AM, 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	0.56	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	0.26	ug/L	0.50	0.19	EPA-524.2	ND	J	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	0.89	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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-04	Client Sample Name: JPL-GW, MW-14-3, 10/16/2018 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)	86.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.2	%	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	10/21/18 08:44	10/21/18 20:12	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832621-04	Client Sample Name: JPL-GW, MW-14-3, 10/16/2018 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	10/21/18 08:44	10/21/18 20:12	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832621-04	Client Sample Name: JPL-GW, MW-14-3, 10/16/2018 9:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	4.7	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 14:54	MIG	IC6	1	B028648

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832621-04	Client Sample Name: JPL-GW, MW-14-3, 10/16/2018 9:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/17/18 07:04	10/17/18 07:42		MC1	KONE-1	1	B027773
2	EPA-200.8	10/24/18 09:00	10/24/18 18:34		ARD	PE-EL4	1	B028185

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-05	Client Sample Name: JPL-GW, MW-14-2, 10/16/2018 9:20:00AM, 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		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	0.39	ug/L	0.50	0.14	EPA-524.2	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	0.17	ug/L	0.50	0.15	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-05	Client Sample Name: JPL-GW, MW-14-2, 10/16/2018 9:20:00AM, 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	0.29	ug/L	0.50	0.23	EPA-524.2	ND	J	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	1.1	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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-05	Client Sample Name: JPL-GW, MW-14-2, 10/16/2018 9:20:00AM, 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)	87.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	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	10/21/18 08:44	10/21/18 20:35	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832621-05	Client Sample Name: JPL-GW, MW-14-2, 10/16/2018 9:20:00AM, 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	10/21/18 08:44	10/21/18 20:35	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832621-05	Client Sample Name: JPL-GW, MW-14-2, 10/16/2018 9:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.7	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 15:40	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832621-05	Client Sample Name: JPL-GW, MW-14-2, 10/16/2018 9:20:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/17/18 07:04	10/17/18 07:22	MC1	KONE-1	1	B027773
2	EPA-200.8	10/24/18 09:00	10/24/18 18:38	ARD	PE-EL4	1	B028185

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-06	Client Sample Name: JPL-GW, MW-25-5, 10/16/2018 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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-06	Client Sample Name: JPL-GW, MW-25-5, 10/16/2018 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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-06	Client Sample Name: JPL-GW, MW-25-5, 10/16/2018 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)	91.9	%	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	10/21/18 08:44	10/21/18 20:58	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832621-06	Client Sample Name: JPL-GW, MW-25-5, 10/16/2018 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	10/21/18 08:44	10/21/18 20:58	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832621-06	Client Sample Name: JPL-GW, MW-25-5, 10/16/2018 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	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 15:55	MIG	IC6	1	B028648

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832621-06	Client Sample Name: JPL-GW, MW-25-5, 10/16/2018 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	0.0020	0.00070	EPA-7196	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-7196	10/17/18 07:04	10/17/18 07:22		MC1	KONE-1	1	B027773
2	EPA-200.8	10/24/18 09:00	10/24/18 18:41		ARD	PE-EL4	1	B028185

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-07 Client Sample Name: JPL-GW, MW-25-4, 10/16/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-07	Client Sample Name: JPL-GW, MW-25-4, 10/16/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-07	Client Sample Name: JPL-GW, MW-25-4, 10/16/2018 11:35:00AM, 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		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)	91.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.3	%	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	10/21/18 08:44	10/21/18 21:21	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832621-07	Client Sample Name: JPL-GW, MW-25-4, 10/16/2018 11:35:00AM, 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	10/21/18 08:44	10/21/18 21:21	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832621-07	Client Sample Name: JPL-GW, MW-25-4, 10/16/2018 11:35:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	8.5	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 16:11	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832621-07	Client Sample Name: JPL-GW, MW-25-4, 10/16/2018 11:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/17/18 07:04	10/17/18 07:22		MC1	KONE-1	1	B027773
2	EPA-200.8	10/24/18 09:00	10/24/18 18:45		ARD	PE-EL4	1	B028185

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Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-08	Client Sample Name: JPL-GW, MW-25-3, 10/16/2018 12:15:00PM, 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	0.40	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-08	Client Sample Name: JPL-GW, MW-25-3, 10/16/2018 12:15:00PM, 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	0.54	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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-08	Client Sample Name: JPL-GW, MW-25-3, 10/16/2018 12:15:00PM, 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)	95.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.3	%	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	10/21/18 06:00	10/22/18 07:48	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832621-08	Client Sample Name: JPL-GW, MW-25-3, 10/16/2018 12:15:00PM, 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	10/21/18 06:00	10/22/18 07:48	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832621-08	Client Sample Name: JPL-GW, MW-25-3, 10/16/2018 12:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	9.8	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 16:26	MIG	IC6	1	B028649

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832621-08	Client Sample Name: JPL-GW, MW-25-3, 10/16/2018 12:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0033	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	2.5	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/17/18 07:04	10/17/18 07:58	MC1	KONE-1	1	B027774
2	EPA-200.8	10/24/18 09:00	10/24/18 18:48	ARD	PE-EL4	1	B028185

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Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-09	Client Sample Name: JPL-GW, MW-25-2, 10/16/2018 1:00:00PM, 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
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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-09	Client Sample Name: JPL-GW, MW-25-2, 10/16/2018 1:00:00PM, 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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-09	Client Sample Name: JPL-GW, MW-25-2, 10/16/2018 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		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)	96.0	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.6	%	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	10/21/18 08:44	10/21/18 21:44	MGC	MS-V5	1	B027892

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832621-09	Client Sample Name: JPL-GW, MW-25-2, 10/16/2018 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	10/21/18 08:44	10/21/18 21:44	MGC	MS-V5	1	B027892

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832621-09	Client Sample Name: JPL-GW, MW-25-2, 10/16/2018 1:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	13	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 17:27	MIG	IC6	1	B028648

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Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832621-09	Client Sample Name: JPL-GW, MW-25-2, 10/16/2018 1:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0036	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/17/18 07:04	10/17/18 07:22	MC1	KONE-1	1	B027773
2	EPA-200.8	10/24/18 09:00	10/24/18 18:52	ARD	PE-EL4	1	B028185

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID:	1832621-10							
Client Sample Name:	JPL-GW, MW-25-1, 10/16/2018 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		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	0.37	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-10	Client Sample Name: JPL-GW, MW-25-1, 10/16/2018 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	0.54	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	1.2	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: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-10	Client Sample Name: JPL-GW, MW-25-1, 10/16/2018 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)	86.6	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.8	%	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	10/21/18 08:44	10/21/18 22:07	MGC	MS-V5	1	B027892

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832621-10	Client Sample Name: JPL-GW, MW-25-1, 10/16/2018 1:30:00PM, 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	10/21/18 08:44	10/21/18 22:07	MGC	MS-V5	1	B027892

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Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832621-10	Client Sample Name: JPL-GW, MW-25-1, 10/16/2018 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	7.5	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 17:43	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832621-10	Client Sample Name: JPL-GW, MW-25-1, 10/16/2018 1:30:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	0.52		2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/17/18 07:04	10/17/18 07:22	MC1	KONE-1	1	B027773
2	EPA-200.8	10/25/18 09:00	10/26/18 01:27	ARD	PE-EL4	1	B028305

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Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-11	Client Sample Name: JPL-GW, EB-2-101618, 10/16/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-11	Client Sample Name: JPL-GW, EB-2-101618, 10/16/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832621-11	Client Sample Name: JPL-GW, EB-2-101618, 10/16/2018 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)	87.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	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	10/21/18 08:44	10/21/18 22:31	MGC	MS-V5	1	B027892

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Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832621-11	Client Sample Name: JPL-GW, EB-2-101618, 10/16/2018 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	10/21/18 08:44	10/21/18 22:31	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832621-11	Client Sample Name: JPL-GW, EB-2-101618, 10/16/2018 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	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 17:58	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832621-11	Client Sample Name: JPL-GW, EB-2-101618, 10/16/2018 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	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	0.70	ug/L	3.0	0.50	EPA-200.8	0.52	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/17/18 07:04	10/17/18 07:42	MC1	KONE-1	1	B027773
2	EPA-200.8	10/25/18 09:00	10/26/18 00:59	ARD	PE-EL4	1	B028305

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027892						
Benzene	B027892-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B027892-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B027892-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B027892-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B027892-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B027892-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B027892-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B027892-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B027892-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B027892-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B027892-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B027892-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B027892-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B027892-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B027892-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B027892-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B027892-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B027892-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B027892-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B027892-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B027892-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B027892-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B027892-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B027892-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B027892-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B027892-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B027892-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B027892-BLK1	ND	ug/L	0.50	0.14	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027892						
trans-1,3-Dichloropropene	B027892-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B027892-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B027892-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B027892-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B027892-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B027892-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B027892-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B027892-BLK1	ND	ug/L	0.50	0.12	
Styrene	B027892-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B027892-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B027892-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B027892-BLK1	ND	ug/L	0.50	0.23	
Toluene	B027892-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B027892-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B027892-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B027892-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B027892-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B027892-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B027892-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B027892-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B027892-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B027892-BLK1	ND	ug/L	0.50	0.18	
Acetone	B027892-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B027892-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B027892-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B027892-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B027892-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B027892-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B027892-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B027892-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B027892-BLK1	ND	ug/L	4.0	1.3	

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B027892

Ethyl t-butyl ether	B027892-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B027892-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B027892-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B027892-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B027892-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B027892-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B027892-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B027892-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B027892-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B027892-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B027892-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B027892-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B027892-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B027892-BLK1	87.0	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B027892-BLK1	103	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B027892-BLK1	97.4	%	80 - 120 (LCL - UCL)		

QC Batch ID: B027893

Benzene	B027893-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B027893-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B027893-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B027893-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B027893-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B027893-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B027893-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B027893-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B027893-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B027893-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B027893-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B027893-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B027893-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B027893-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B027893-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B027893-BLK1	ND	ug/L	0.50	0.093	

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Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027893						
Dibromochloromethane	B027893-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B027893-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B027893-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B027893-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B027893-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B027893-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B027893-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B027893-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B027893-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B027893-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B027893-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B027893-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B027893-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B027893-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B027893-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B027893-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B027893-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B027893-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B027893-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B027893-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B027893-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B027893-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B027893-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B027893-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B027893-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B027893-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B027893-BLK1	ND	ug/L	0.50	0.12	
Styrene	B027893-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B027893-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B027893-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B027893-BLK1	ND	ug/L	0.50	0.23	
Toluene	B027893-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B027893-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B027893-BLK1	ND	ug/L	0.50	0.15	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Table with 7 columns: Constituent, QC Sample ID, MB Result, Units, PQL, MDL, Lab Quals. Includes a QC Batch ID: B027893 and a list of 30 chemical constituents with their respective results and limits.

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027892										
Benzene	B027892-BS1	LCS	24.820	25.000	ug/L	99.3		70 - 130		
Bromodichloromethane	B027892-BS1	LCS	25.470	25.000	ug/L	102		70 - 130		
Chlorobenzene	B027892-BS1	LCS	23.350	25.000	ug/L	93.4		70 - 130		
Chloroethane	B027892-BS1	LCS	27.580	25.000	ug/L	110		70 - 130		
1,4-Dichlorobenzene	B027892-BS1	LCS	23.150	25.000	ug/L	92.6		70 - 130		
1,1-Dichloroethane	B027892-BS1	LCS	27.550	25.000	ug/L	110		70 - 130		
1,1-Dichloroethene	B027892-BS1	LCS	26.050	25.000	ug/L	104		70 - 130		
Toluene	B027892-BS1	LCS	24.600	25.000	ug/L	98.4		70 - 130		
Trichloroethene	B027892-BS1	LCS	25.100	25.000	ug/L	100		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B027892-BS1	LCS	8.5600	10.000	ug/L	85.6		75 - 125		
Toluene-d8 (Surrogate)	B027892-BS1	LCS	10.020	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	B027892-BS1	LCS	9.5300	10.000	ug/L	95.3		80 - 120		

QC Batch ID: B027893										
Benzene	B027893-BS1	LCS	25.210	25.000	ug/L	101		70 - 130		
Bromodichloromethane	B027893-BS1	LCS	27.160	25.000	ug/L	109		70 - 130		
Chlorobenzene	B027893-BS1	LCS	22.920	25.000	ug/L	91.7		70 - 130		
Chloroethane	B027893-BS1	LCS	27.180	25.000	ug/L	109		70 - 130		
1,4-Dichlorobenzene	B027893-BS1	LCS	23.670	25.000	ug/L	94.7		70 - 130		
1,1-Dichloroethane	B027893-BS1	LCS	28.320	25.000	ug/L	113		70 - 130		
1,1-Dichloroethene	B027893-BS1	LCS	27.210	25.000	ug/L	109		70 - 130		
Toluene	B027893-BS1	LCS	24.210	25.000	ug/L	96.8		70 - 130		
Trichloroethene	B027893-BS1	LCS	24.480	25.000	ug/L	97.9		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B027893-BS1	LCS	9.3500	10.000	ug/L	93.5		75 - 125		
Toluene-d8 (Surrogate)	B027893-BS1	LCS	9.7000	10.000	ug/L	97.0		80 - 120		
4-Bromofluorobenzene (Surrogate)	B027893-BS1	LCS	9.1300	10.000	ug/L	91.3		80 - 120		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B027892 and Used client sample: Y - Description: MW-14-4, 10/16/2018 08:15.

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: B027893 and Used client sample: Y - Description: MW-25-3, 10/16/2018 12:15.

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027893		Used client sample: Y - Description: MW-25-3, 10/16/2018 12:15								
1,1-Dichloroethene	MS	1832621-08	ND	29.020	25.000	ug/L		116		70 - 130
	MSD	1832621-08	ND	29.000	25.000	ug/L	0.1	116	20	70 - 130
Toluene	MS	1832621-08	ND	26.040	25.000	ug/L		104		70 - 130
	MSD	1832621-08	ND	25.450	25.000	ug/L	2.3	102	20	70 - 130
Trichloroethene	MS	1832621-08	ND	25.960	25.000	ug/L		104		70 - 130
	MSD	1832621-08	ND	26.420	25.000	ug/L	1.8	106	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1832621-08	ND	9.5000	10.000	ug/L		95.0		75 - 125
	MSD	1832621-08	ND	9.6300	10.000	ug/L	1.4	96.3		75 - 125
Toluene-d8 (Surrogate)	MS	1832621-08	ND	10.210	10.000	ug/L		102		80 - 120
	MSD	1832621-08	ND	9.9300	10.000	ug/L	2.8	99.3		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1832621-08	ND	9.6700	10.000	ug/L		96.7		80 - 120
	MSD	1832621-08	ND	9.7700	10.000	ug/L	1.0	97.7		80 - 120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027892						
Chloroacetonitrile	B027892-BLK1	0	ug/L			
1-Chlorobutane	B027892-BLK1	0	ug/L			
1,1-Dichloropropanone	B027892-BLK1	0	ug/L			
Methyl acrylate	B027892-BLK1	0	ug/L			
Nitrobenzene	B027892-BLK1	0	ug/L			
2-Nitropropane	B027892-BLK1	0	ug/L			
QC Batch ID: B027893						
Chloroacetonitrile	B027893-BLK1	0	ug/L			
1-Chlorobutane	B027893-BLK1	0	ug/L			
1,1-Dichloropropanone	B027893-BLK1	0	ug/L			
Methyl acrylate	B027893-BLK1	0	ug/L			
Nitrobenzene	B027893-BLK1	0	ug/L			
2-Nitropropane	B027893-BLK1	0	ug/L			

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028648						
Perchlorate	B028648-BLK1	ND	ug/L	4.0	0.92	
QC Batch ID: B028649						
Perchlorate	B028649-BLK1	ND	ug/L	4.0	0.92	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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		
QC Batch ID: B028648											
Perchlorate	B028648-BS1	LCS	10.739	10.000	ug/L	107		85	115		
QC Batch ID: B028649											
Perchlorate	B028649-BS1	LCS	10.507	10.000	ug/L	105		85	115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028648		Used client sample: Y - Description: MW-14-4, 10/16/2018 08:15								
Perchlorate	DUP	1832621-03	4.1718	4.1714		ug/L	0.0		15	
	MS	1832621-03	4.1718	14.678	10.101	ug/L		104	80 - 120	
	MSD	1832621-03	4.1718	14.640	10.101	ug/L	0.3	104	15 80 - 120	
QC Batch ID: B028649		Used client sample: Y - Description: MW-25-3, 10/16/2018 12:15								
Perchlorate	DUP	1832621-08	9.7750	9.7128		ug/L	0.6		15	
	MS	1832621-08	9.7750	20.236	10.101	ug/L		104	80 - 120	
	MSD	1832621-08	9.7750	20.133	10.101	ug/L	0.5	103	15 80 - 120	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B027773						
Hexavalent Chromium	B027773-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B027774						
Hexavalent Chromium	B027774-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028185						
Total Recoverable Chromium	B028185-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B028305						
Total Recoverable Chromium	B028305-BLK1	0.52300	ug/L	3.0	0.50	J

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027773										
Hexavalent Chromium	B027773-BS1	LCS	0.052972	0.050000	mg/L	106		85 - 115		
QC Batch ID: B027774										
Hexavalent Chromium	B027774-BS1	LCS	0.053520	0.050000	mg/L	107		85 - 115		
QC Batch ID: B028185										
Total Recoverable Chromium	B028185-BS1	LCS	41.429	40.000	ug/L	104		85 - 115		
QC Batch ID: B028305										
Total Recoverable Chromium	B028305-BS1	LCS	44.595	40.000	ug/L	111		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027773		Used client sample: Y - Description: MW-14-4, 10/16/2018 08:15								
Hexavalent Chromium	DUP	1832621-03	0.0023950	0.0023430		mg/L	2.2		10	
	MS	1832621-03	0.0023950	0.056941	0.052632	mg/L		104		85 - 115
	MSD	1832621-03	0.0023950	0.057065	0.052632	mg/L	0.2	104	10	85 - 115
QC Batch ID: B027774		Used client sample: Y - Description: MW-25-3, 10/16/2018 12:15								
Hexavalent Chromium	DUP	1832621-08	0.0032730	0.0032700		mg/L	0.1		10	
	MS	1832621-08	0.0032730	0.058358	0.052632	mg/L		105		85 - 115
	MSD	1832621-08	0.0032730	0.057477	0.052632	mg/L	1.5	103	10	85 - 115
QC Batch ID: B028185		Used client sample: Y - Description: MW-14-5, 10/16/2018 07:35								
Total Recoverable Chromium	DUP	1832621-02	ND	0.88300		ug/L			20	J
	MS	1832621-02	ND	44.073	40.000	ug/L		110		70 - 130
	MSD	1832621-02	ND	41.715	40.000	ug/L	5.5	104	20	70 - 130
QC Batch ID: B028305		Used client sample: Y - Description: EB-2-101618, 10/16/2018 12:25								
Total Recoverable Chromium	DUP	1832621-11	0.70500	0.62100		ug/L	12.7		20	J
	MS	1832621-11	0.70500	43.920	40.000	ug/L		108		70 - 130
	MSD	1832621-11	0.70500	43.944	40.000	ug/L	0.1	108	20	70 - 130

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/02/2018 9:42
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 11/08/2018

David Conner

Tidewater Inc.

3761 Attucks Drive

Powell, OH 43065

Client Project: 4Q18

BCL Project: JPL- GW Monitoring Wells

BCL Work Order: 1832779

Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/17/2018. 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: Client: Tidewater, Inc.
Client: Tidewater, Inc.
Attn: David Conner
Street Address: 3761 Allucks Drive
City: Powell **State:** OH **Zip:** 43065
Phone: 626 1296 - 5715 **Fax:** 614 792-2897
Email Address: david.conner@tidewater.net
Submission #: 18-32179

Project Description: JPL-GW Monitoring
Project Code: 4Q18
Sampler (s): Blaine Tech

Analysis Requested:
 Hexavalent Cr (7198)
 Nitrite (353.2)
 Orthophosphate (365.1)
 Chloride, Nitrate, Sulfate (300)
 Perchlorate (EPA 314.0)
 Total Cr (200.8)
 VOCs EPA 524.2

Sample #	Sample Description	Date	Time	Matrix*
-1	TB-3-1017/S	10/17/18	0700	GW
-2	MW-3-5		0735	GW
-3	MW-3-4		0700	GW
-4	DUP-2-4&18		0810	GW
-5	MW-3-3		0850	GW
-6	MW-3-2		0915	GW
-7	MW-3-1		0940	GW
-8	MW-17-5		1135	GW
-9	MW-17-4		1210	GW
-10	MW-17-3		1235	GW
-11	MW-17-2		1315	GW

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: _____
 1. Relinquished By: _____ Date: 10/17/18 Time: 1420
 2. Relinquished By: _____ Date: 10/17/18 Time: 1800
 3. Relinquished By: _____ Date: 10/18/18 Time: 1800

Billing:
 Client: Tidewater, Inc.
 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

Notes:
 CHIK BY DISTRICTION
 SUB-OUT
 Level IV
 NO SHORT HOLDING TIME
 CR NO NO OP SS
 DO CL BOD MBAS GGT
 Level IV

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: Client: Tidewater, Inc.
 Attn: David Conner
 Street Address: 3761 Allucks Drive
 City: Powell State: OH Zip: 43065
 Phone: 626 1298 Fax: 614 792-2897
 Email Address: david.conner@tidco.net
 Submission #: 18-32779

Project Description: JPL-GW Monitoring
 Project Code: 4Q18
 Sampler(s): Blaine Tech

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*
12	DIP-3-4Q18	10/17/18	1325	GW
13	EB-3-101718	10/17/18	1330	GW

Analysis Requested

Analysis	Requested
VOCs EPA 524.2	X
Total Cr (200.8)	X
Perchlorate (EPA 314.0)	X
Chloride, Nitrate, Sulfate (300)	
Orthophosphate (365.1)	
Nitrite (353.2)	X
Hexavalent Cr (7196)	X

Billing

Client: Tidewater, Inc.
 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
 GC (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 GC)

Global ID:

Global ID	Received By	Date	Time
1	[Signature]	10/17/18	1420
2	[Signature]	10/17/18	1800
3	[Signature]	10/18/18	1800

Cost Center:

Cost Center	Requisitioned By	Date	Time
1	[Signature]	10/17/18	1420
2	[Signature]	10/17/18	1800
3	[Signature]	10/18/18	1800

Matrix Site:

Matrix Site	Requisitioned By	Date	Time
1	[Signature]	10/17/18	1420
2	[Signature]	10/17/18	1800
3	[Signature]	10/18/18	1800

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 of 3

Submission #: 18-32779

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 N / 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: PE Thermometer ID: 208 Date/Time: 10/17/2000 Analyst Init: EMC

Temperature: (A) 2.4 °C / (C) 2.1 °C

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES					D					
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz			E	F	E					
PT CYANIDE										
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		RDC	ABC	ABC	ABC	ABC	ABC	ABC	ABC	ABC
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/608/808										
QT EPA 515.1/8150										
QT EPA 525										
QT RPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz RPA 548										
QT RPA 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: GSP Date/Time: 10/17/2016
 A = Actual / C = Corrected



Laboratories, Inc.

Environmental Testing Laboratory Since 1949

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 3

Submission #: 1832779

SHIPPING INFORMATION Fed Ex <input type="checkbox"/> UPS <input checked="" 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 checked="" type="checkbox"/> <u>W / S</u>
--	--	---	--	---

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: 0.98 Container: PE Thermometer ID: 708 Date/Time: 10/17/2000
 Temperature: (A) 2.4 °C / (C) 2.1 °C Analyst Init: ENC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁴⁺										
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	ABC							
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8130										
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: gcd Date/Time: 10/17/2000

A = Actual / C = Corrected

Rev 21 05/23/2016
 [S:\WP\Doc\Wet\Perfect\LAB_DOC\CS02\M515\ANRECRev 20]



BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 3

Submission #: 18-32779

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

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: PE. Thermometer ID: 208. Date/Time: 10/17/1800. Analyst Init: ENR. Temperature: (A) 3.3 °C, (C) 3.0 °C.

Table with columns for SAMPLE CONTAINERS and SAMPLE NUMBERS (2-10). Rows include various sample types like QT PR UNPRES, INORGANIC CHEMICAL METALS, PT CYANIDE, etc.

Comments: Sample Numbering Completed By: [Signature] Date/Time: 10/17/1916 Rev 21 05/23/2016



Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832779-01	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: TB-3-101718 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 07:00 Sample Depth: --- Lab Matrix: Water Sample Type: Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-3-101718 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1832779-02	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-3-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 07:35 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-3-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1832779-03	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-3-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 08:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832779-04	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: DUP-2-4Q18 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 08:10 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-2-4Q18 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1832779-05	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-3-3 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 08:50 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-3-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1832779-06	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-3-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 09:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832779-07	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-3-1 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 09:40 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-3-1 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1832779-08	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-17-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 11:35 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-17-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1832779-09	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-17-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 12:10 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832779-10	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-17-3 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 12:35 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-17-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1832779-11	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: MW-17-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 13:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-17-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1832779-12	COC Number: --- Project Number: NASA/JPL Sampling Location: --- Sampling Point: DUP-3-4Q18 Sampled By: Blaine Tech of BTST	Receive Date: 10/17/2018 18:00 Sampling Date: 10/17/2018 13:25 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-3-4Q18 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832779-13	COC Number: ---	Receive Date: 10/17/2018 18:00
	Project Number: NASA/JPL	Sampling Date: 10/17/2018 13:30
	Sampling Location: ---	Sample Depth: ---
	Sampling Point: EB-3-101718	Lab Matrix: Water
	Sampled By: Blaine Tech of BTST	Sample Type: Groundwater
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): EB-3-101718
		Matrix: WG
		Sample QC Type (SACode): CS
		Cooler ID:

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-01	Client Sample Name: NASA/JPL, TB-3-101718, 10/17/2018 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: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-01	Client Sample Name: NASA/JPL, TB-3-101718, 10/17/2018 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: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-01	Client Sample Name: NASA/JPL, TB-3-101718, 10/17/2018 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)	88.0	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.9	%	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	10/21/18 07:00	10/21/18 22:54	MGC	MS-V5	1	B027891

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-01	Client Sample Name: NASA/JPL, TB-3-101718, 10/17/2018 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	10/21/18 07:00	10/21/18 22:54	MGC	MS-V5	1	B027891

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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-02	Client Sample Name: NASA/JPL, MW-3-5, 10/17/2018 7:35:00AM, 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	0.15	ug/L	0.50	0.15	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-02	Client Sample Name: NASA/JPL, MW-3-5, 10/17/2018 7:35:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-02	Client Sample Name: NASA/JPL, MW-3-5, 10/17/2018 7:35:00AM, 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)	93.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.2	%	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	10/21/18 07:00	10/21/18 23:17	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-02	Client Sample Name: NASA/JPL, MW-3-5, 10/17/2018 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	10/21/18 07:00	10/21/18 23:17	MGC	MS-V5	1	B027891

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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-02	Client Sample Name: NASA/JPL, MW-3-5, 10/17/2018 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	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/30/18 22:00	10/31/18 04:17	SAV	IC6	1	B028841

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-02	Client Sample Name: NASA/JPL, MW-3-5, 10/17/2018 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	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.7	ug/L	3.0	0.50	EPA-200.8	0.58	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/17/18 22:06	10/17/18 22:32		MIG	KONE-1	1	B027965
2	EPA-200.8	10/25/18 09:00	10/26/18 01:47		ARD	PE-EL3	1	B028306

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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-03	Client Sample Name: NASA/JPL, MW-3-4, 10/17/2018 8:00:00AM, 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	0.16	ug/L	0.50	0.15	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-03	Client Sample Name: NASA/JPL, MW-3-4, 10/17/2018 8:00:00AM, 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: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-03	Client Sample Name: NASA/JPL, MW-3-4, 10/17/2018 8:00:00AM, 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)	90.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.5	%	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	10/21/18 07:00	10/21/18 23:40	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-03	Client Sample Name: NASA/JPL, MW-3-4, 10/17/2018 8:00:00AM, 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	10/21/18 07:00	10/21/18 23:40	MGC	MS-V5	1	B027891

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-03	Client Sample Name: NASA/JPL, MW-3-4, 10/17/2018 8:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.1	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/24/18 09:00	10/24/18 17:38	MIG	IC6	1	B028208

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Tidewater Inc.
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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-03	Client Sample Name: NASA/JPL, MW-3-4, 10/17/2018 8:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	19	ug/L	3.0	0.50	EPA-200.8	0.58		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/17/18 22:06	10/17/18 22:32		MIG	KONE-1	1	B027965
2	EPA-200.8	10/25/18 09:00	10/26/18 02:14		ARD	PE-EL3	1	B028306

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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-04	Client Sample Name: NASA/JPL, DUP-2-4Q18, 10/17/2018 8:10:00AM, 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	0.18	ug/L	0.50	0.15	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-04	Client Sample Name: NASA/JPL, DUP-2-4Q18, 10/17/2018 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
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: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-04	Client Sample Name: NASA/JPL, DUP-2-4Q18, 10/17/2018 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		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)	93.6	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	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	10/21/18 07:00	10/22/18 00:03	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-04	Client Sample Name: NASA/JPL, DUP-2-4Q18, 10/17/2018 8:10:00AM, 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	10/21/18 07:00	10/22/18 00:03	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-04	Client Sample Name: NASA/JPL, DUP-2-4Q18, 10/17/2018 8:10:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.0	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/24/18 09:00	10/24/18 12:31	SAV	IC6	1	B028208

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-04	Client Sample Name: NASA/JPL, DUP-2-4Q18, 10/17/2018 8:10:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	27	ug/L	3.0	0.50	EPA-200.8	0.58		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/17/18 22:06	10/17/18 22:32		MIG	KONE-1	1	B027965
2	EPA-200.8	10/25/18 09:00	10/26/18 02:18		ARD	PE-EL3	1	B028306

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-05	Client Sample Name: NASA/JPL, MW-3-3, 10/17/2018 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		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: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-05		Client Sample Name: NASA/JPL, MW-3-3, 10/17/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-05	Client Sample Name: NASA/JPL, MW-3-3, 10/17/2018 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		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)	94.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.2	%	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	10/21/18 07:00	10/22/18 00:26	MGC	MS-V5	1	B027891

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-05	Client Sample Name: NASA/JPL, MW-3-3, 10/17/2018 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	10/21/18 07:00	10/22/18 00:26	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-05	Client Sample Name: NASA/JPL, MW-3-3, 10/17/2018 8:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.1	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/24/18 09:00	10/24/18 12:46	SAV	IC6	1	B028208

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-05	Client Sample Name: NASA/JPL, MW-3-3, 10/17/2018 8:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00084	mg/L	0.0020	0.00070	EPA-7196	ND	J	1
Total Recoverable Chromium	3.0	ug/L	3.0	0.50	EPA-200.8	0.58		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/17/18 22:06	10/17/18 22:32		MIG	KONE-1	1	B027965
2	EPA-200.8	10/25/18 09:00	10/26/18 02:21		ARD	PE-EL3	1	B028306

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1832779-06) and Client Sample Name (NASA/JPL, MW-3-2, 10/17/2018 9:15:00AM, Blaine Tech)

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

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-06	Client Sample Name: NASA/JPL, MW-3-2, 10/17/2018 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
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: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-06	Client Sample Name: NASA/JPL, MW-3-2, 10/17/2018 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		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)	95.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	105	%	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	10/21/18 07:00	10/22/18 00:49	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-06	Client Sample Name: NASA/JPL, MW-3-2, 10/17/2018 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	10/21/18 07:00	10/22/18 00:49	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-06	Client Sample Name: NASA/JPL, MW-3-2, 10/17/2018 9:15:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/24/18 09:00	10/24/18 13:01	SAV	IC6	1	B028208

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-06	Client Sample Name: NASA/JPL, MW-3-2, 10/17/2018 9:15:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	2.0	ug/L	3.0	0.50	EPA-200.8	0.58	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/17/18 22:06	10/17/18 22:32		MIG	KONE-1	1	B027965
2	EPA-200.8	10/25/18 09:00	10/26/18 02:25		ARD	PE-EL3	1	B028306

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-07	Client Sample Name: NASA/JPL, MW-3-1, 10/17/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-07	Client Sample Name: NASA/JPL, MW-3-1, 10/17/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-07	Client Sample Name: NASA/JPL, MW-3-1, 10/17/2018 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)	93.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	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	10/21/18 07:00	10/22/18 01:12	MGC	MS-V5	1	B027891

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-07	Client Sample Name: NASA/JPL, MW-3-1, 10/17/2018 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	10/21/18 07:00	10/22/18 01:12	MGC	MS-V5	1	B027891

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-07	Client Sample Name: NASA/JPL, MW-3-1, 10/17/2018 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	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/24/18 09:00	10/24/18 13:17	SAV	IC6	1	B028208

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-07	Client Sample Name: NASA/JPL, MW-3-1, 10/17/2018 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.2	ug/L	3.0	0.50	EPA-200.8	0.58	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/17/18 22:06	10/17/18 22:35		MIG	KONE-1	1	B027965
2	EPA-200.8	10/25/18 09:00	10/26/18 02:28		ARD	PE-EL3	1	B028306

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-08	Client Sample Name: NASA/JPL, MW-17-5, 10/17/2018 11:35:00AM, 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	0.46	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-08	Client Sample Name: NASA/JPL, MW-17-5, 10/17/2018 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	0.29	ug/L	0.50	0.23	EPA-524.2	ND	J	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	0.83	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: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-08	Client Sample Name: NASA/JPL, MW-17-5, 10/17/2018 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)	90.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	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	10/21/18 08:44	10/22/18 01:35	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-08	Client Sample Name: NASA/JPL, MW-17-5, 10/17/2018 11:35:00AM, 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	10/21/18 08:44	10/22/18 01:35	MGC	MS-V5	1	B027892

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Tidewater Inc.
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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-08	Client Sample Name: NASA/JPL, MW-17-5, 10/17/2018 11:35:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	4.0	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/24/18 09:00	10/24/18 13:32	SAV	IC6	1	B028208

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-08	Client Sample Name: NASA/JPL, MW-17-5, 10/17/2018 11:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0017	mg/L	0.0020	0.00070	EPA-7196	ND	J	1
Total Recoverable Chromium	3.1	ug/L	3.0	0.50	EPA-200.8	0.58		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/17/18 22:06	10/17/18 22:35		MIG	KONE-1	1	B027965
2	EPA-200.8	10/25/18 09:00	10/26/18 02:32		ARD	PE-EL3	1	B028306

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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-09	Client Sample Name: NASA/JPL, MW-17-4, 10/17/2018 12:10:00PM, 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	0.42	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-09	Client Sample Name: NASA/JPL, MW-17-4, 10/17/2018 12:10:00PM, 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	0.27	ug/L	0.50	0.23	EPA-524.2	ND	J	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	0.66	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: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-09	Client Sample Name: NASA/JPL, MW-17-4, 10/17/2018 12:10:00PM, 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)	94.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.0	%	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	10/21/18 08:44	10/22/18 01:58	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-09	Client Sample Name: NASA/JPL, MW-17-4, 10/17/2018 12:10:00PM, 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	10/21/18 08:44	10/22/18 01:58	MGC	MS-V5	1	B027892

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-09	Client Sample Name: NASA/JPL, MW-17-4, 10/17/2018 12:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	4.2	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/24/18 09:00	10/24/18 14:18	MIG	IC6	1	B028208

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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-09	Client Sample Name: NASA/JPL, MW-17-4, 10/17/2018 12:10:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0024	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	4.0	ug/L	3.0	0.50	EPA-200.8	0.58		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/17/18 22:06	10/17/18 22:35		MIG	KONE-1	1	B027965
2	EPA-200.8	10/25/18 09:00	10/26/18 16:11		ARD	PE-EL3	1	B028306

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-10 Client Sample Name: NASA/JPL, MW-17-3, 10/17/2018 12:35:00PM, 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
Chloroform	0.36	ug/L	0.50	0.14	EPA-524.2	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	0.15	ug/L	0.50	0.15	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-10	Client Sample Name: NASA/JPL, MW-17-3, 10/17/2018 12:35:00PM, 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	0.28	ug/L	0.50	0.23	EPA-524.2	ND	J	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	1.5	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: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-10	Client Sample Name: NASA/JPL, MW-17-3, 10/17/2018 12:35:00PM, 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		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)	99.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	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	10/21/18 08:44	10/22/18 02:21	MGC	MS-V5	1	B027892

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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-10	Client Sample Name: NASA/JPL, MW-17-3, 10/17/2018 12:35:00PM, 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	10/21/18 08:44	10/22/18 02:21	MGC	MS-V5	1	B027892

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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-10	Client Sample Name: NASA/JPL, MW-17-3, 10/17/2018 12:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	5.1	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/24/18 09:00	10/24/18 14:34	MIG	IC6	1	B028208

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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-10	Client Sample Name: NASA/JPL, MW-17-3, 10/17/2018 12:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.0	ug/L	3.0	0.50	EPA-200.8	0.58	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/17/18 22:06	10/17/18 22:35		MIG	KONE-1	1	B027965
2	EPA-200.8	10/25/18 09:00	10/26/18 02:39		ARD	PE-EL3	1	B028306

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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-11	Client Sample Name: NASA/JPL, MW-17-2, 10/17/2018 1:15:00PM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-11 Client Sample Name: NASA/JPL, MW-17-2, 10/17/2018 1:15:00PM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-11 **Client Sample Name:** NASA/JPL, MW-17-2, 10/17/2018 1:15:00PM, 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		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)	96.0	%	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	10/21/18 08:44	10/22/18 02:44	MGC	MS-V5	1	B027892

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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-11	Client Sample Name: NASA/JPL, MW-17-2, 10/17/2018 1:15:00PM, 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	10/21/18 08:44	10/22/18 02:44	MGC	MS-V5	1	B027892

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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-11	Client Sample Name: NASA/JPL, MW-17-2, 10/17/2018 1:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/24/18 09:00	10/24/18 14:49	MIG	IC6	1	B028208

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-11	Client Sample Name: NASA/JPL, MW-17-2, 10/17/2018 1:15:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.7	ug/L	3.0	0.50	EPA-200.8	0.58	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/17/18 22:06	10/17/18 22:53		MIG	KONE-1	1	B027966
2	EPA-200.8	10/25/18 09:00	10/26/18 16:15		ARD	PE-EL3	1	B028306

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-12	Client Sample Name: NASA/JPL, DUP-3-4Q18, 10/17/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-12	Client Sample Name: NASA/JPL, DUP-3-4Q18, 10/17/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-12	Client Sample Name: NASA/JPL, DUP-3-4Q18, 10/17/2018 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)	95.2	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	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	10/21/18 08:44	10/22/18 03:07	MGC	MS-V5	1	B027892

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Tidewater Inc.
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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-12	Client Sample Name: NASA/JPL, DUP-3-4Q18, 10/17/2018 1:25:00PM, 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	10/21/18 08:44	10/22/18 03:07	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-12	Client Sample Name: NASA/JPL, DUP-3-4Q18, 10/17/2018 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	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/24/18 09:00	10/24/18 15:04	MIG	IC6	1	B028208

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-12	Client Sample Name: NASA/JPL, DUP-3-4Q18, 10/17/2018 1:25:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/17/18 22:06	10/17/18 22:53		MIG	KONE-1	1	B027966
2	EPA-200.8	10/23/18 11:00	10/24/18 11:35		ARD	PE-EL4	1	B028112

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1832779-13) and Client Sample Name (NASA/JPL, EB-3-101718, 10/17/2018 1:30:00PM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-13	Client Sample Name: NASA/JPL, EB-3-101718, 10/17/2018 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
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: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832779-13 **Client Sample Name:** NASA/JPL, EB-3-101718, 10/17/2018 1:30:00PM, 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)	96.0	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.0	%	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	10/21/18 08:44	10/22/18 03:30	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832779-13	Client Sample Name: NASA/JPL, EB-3-101718, 10/17/2018 1:30:00PM, 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	10/21/18 08:44	10/22/18 03:30	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832779-13	Client Sample Name: NASA/JPL, EB-3-101718, 10/17/2018 1:30:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/24/18 09:00	10/24/18 15:20	MIG	IC6	1	B028208

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832779-13	Client Sample Name: NASA/JPL, EB-3-101718, 10/17/2018 1:30:00PM, Blaine Tech							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.7	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-7196	10/17/18 22:06	10/17/18 22:53	MIG	KONE-1	1	B027966
2	EPA-200.8	10/23/18 11:00	10/24/18 12:10	ARD	PE-EL4	1	B028112

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027891						
Benzene	B027891-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B027891-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B027891-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B027891-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B027891-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B027891-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B027891-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B027891-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B027891-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B027891-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B027891-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B027891-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B027891-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B027891-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B027891-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B027891-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B027891-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B027891-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B027891-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B027891-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B027891-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B027891-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B027891-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B027891-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B027891-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B027891-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B027891-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B027891-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B027891-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B027891-BLK1	ND	ug/L	0.50	0.14	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027891						
trans-1,3-Dichloropropene	B027891-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B027891-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B027891-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B027891-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B027891-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B027891-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B027891-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B027891-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B027891-BLK1	ND	ug/L	0.50	0.12	
Styrene	B027891-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B027891-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B027891-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B027891-BLK1	ND	ug/L	0.50	0.23	
Toluene	B027891-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B027891-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B027891-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B027891-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B027891-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B027891-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B027891-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B027891-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B027891-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B027891-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B027891-BLK1	ND	ug/L	0.50	0.18	
Acetone	B027891-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B027891-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B027891-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B027891-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B027891-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B027891-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B027891-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B027891-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B027891-BLK1	ND	ug/L	4.0	1.3	

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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B027891

Ethyl t-butyl ether	B027891-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B027891-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B027891-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B027891-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B027891-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B027891-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B027891-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B027891-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B027891-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B027891-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B027891-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B027891-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B027891-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B027891-BLK1	85.8	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B027891-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B027891-BLK1	101	%	80 - 120 (LCL - UCL)		

QC Batch ID: B027892

Benzene	B027892-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B027892-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B027892-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B027892-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B027892-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B027892-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B027892-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B027892-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B027892-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B027892-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B027892-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B027892-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B027892-BLK1	ND	ug/L	0.50	0.093	

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Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027892						
Dibromochloromethane	B027892-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B027892-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B027892-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B027892-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B027892-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B027892-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B027892-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B027892-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B027892-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B027892-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B027892-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B027892-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B027892-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B027892-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B027892-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B027892-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B027892-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B027892-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B027892-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B027892-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B027892-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B027892-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B027892-BLK1	ND	ug/L	0.50	0.12	
Styrene	B027892-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B027892-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B027892-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B027892-BLK1	ND	ug/L	0.50	0.23	
Toluene	B027892-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.15	

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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Table with 7 columns: Constituent, QC Sample ID, MB Result, Units, PQL, MDL, Lab Quals. Includes a QC Batch ID: B027892 and various chemical constituents with their respective results and limits.

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027891										
Benzene	B027891-BS1	LCS	25.320	25.000	ug/L	101		70 - 130		
Bromodichloromethane	B027891-BS1	LCS	25.390	25.000	ug/L	102		70 - 130		
Chlorobenzene	B027891-BS1	LCS	23.420	25.000	ug/L	93.7		70 - 130		
Chloroethane	B027891-BS1	LCS	29.010	25.000	ug/L	116		70 - 130		
1,4-Dichlorobenzene	B027891-BS1	LCS	22.770	25.000	ug/L	91.1		70 - 130		
1,1-Dichloroethane	B027891-BS1	LCS	28.000	25.000	ug/L	112		70 - 130		
1,1-Dichloroethene	B027891-BS1	LCS	26.160	25.000	ug/L	105		70 - 130		
Toluene	B027891-BS1	LCS	24.430	25.000	ug/L	97.7		70 - 130		
Trichloroethene	B027891-BS1	LCS	24.020	25.000	ug/L	96.1		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B027891-BS1	LCS	8.2600	10.000	ug/L	82.6		75 - 125		
Toluene-d8 (Surrogate)	B027891-BS1	LCS	10.130	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	B027891-BS1	LCS	10.020	10.000	ug/L	100		80 - 120		

QC Batch ID: B027892										
Benzene	B027892-BS1	LCS	24.820	25.000	ug/L	99.3		70 - 130		
Bromodichloromethane	B027892-BS1	LCS	25.470	25.000	ug/L	102		70 - 130		
Chlorobenzene	B027892-BS1	LCS	23.350	25.000	ug/L	93.4		70 - 130		
Chloroethane	B027892-BS1	LCS	27.580	25.000	ug/L	110		70 - 130		
1,4-Dichlorobenzene	B027892-BS1	LCS	23.150	25.000	ug/L	92.6		70 - 130		
1,1-Dichloroethane	B027892-BS1	LCS	27.550	25.000	ug/L	110		70 - 130		
1,1-Dichloroethene	B027892-BS1	LCS	26.050	25.000	ug/L	104		70 - 130		
Toluene	B027892-BS1	LCS	24.600	25.000	ug/L	98.4		70 - 130		
Trichloroethene	B027892-BS1	LCS	25.100	25.000	ug/L	100		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B027892-BS1	LCS	8.5600	10.000	ug/L	85.6		75 - 125		
Toluene-d8 (Surrogate)	B027892-BS1	LCS	10.020	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	B027892-BS1	LCS	9.5300	10.000	ug/L	95.3		80 - 120		

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Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B027891 and Used client sample: Y - Description: MW-20-3, 10/15/2018 09:15.

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: B027892 and Used client sample: Y - Description: MW-14-4, 10/16/2018 08:15.

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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027892		Used client sample: Y - Description: MW-14-4, 10/16/2018 08:15								
1,1-Dichloroethene	MS	1832621-03	ND	27.300	25.000	ug/L		109		70 - 130
	MSD	1832621-03	ND	27.330	25.000	ug/L	0.1	109	20	70 - 130
Toluene	MS	1832621-03	ND	25.190	25.000	ug/L		101		70 - 130
	MSD	1832621-03	ND	24.790	25.000	ug/L	1.6	99.2	20	70 - 130
Trichloroethene	MS	1832621-03	0.20000	25.020	25.000	ug/L		99.3		70 - 130
	MSD	1832621-03	0.20000	24.610	25.000	ug/L	1.7	97.6	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1832621-03	ND	8.8700	10.000	ug/L		88.7		75 - 125
	MSD	1832621-03	ND	8.4300	10.000	ug/L	5.1	84.3		75 - 125
Toluene-d8 (Surrogate)	MS	1832621-03	ND	10.070	10.000	ug/L		101		80 - 120
	MSD	1832621-03	ND	10.000	10.000	ug/L	0.7	100		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1832621-03	ND	9.7300	10.000	ug/L		97.3		80 - 120
	MSD	1832621-03	ND	9.9300	10.000	ug/L	2.0	99.3		80 - 120

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Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027891						
Chloroacetonitrile	B027891-BLK1	0	ug/L			
1-Chlorobutane	B027891-BLK1	0	ug/L			
1,1-Dichloropropanone	B027891-BLK1	0	ug/L			
Methyl acrylate	B027891-BLK1	0	ug/L			
Nitrobenzene	B027891-BLK1	0	ug/L			
2-Nitropropane	B027891-BLK1	0	ug/L			
QC Batch ID: B027892						
Chloroacetonitrile	B027892-BLK1	0	ug/L			
1-Chlorobutane	B027892-BLK1	0	ug/L			
1,1-Dichloropropanone	B027892-BLK1	0	ug/L			
Methyl acrylate	B027892-BLK1	0	ug/L			
Nitrobenzene	B027892-BLK1	0	ug/L			
2-Nitropropane	B027892-BLK1	0	ug/L			

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028208						
Perchlorate	B028208-BLK1	ND	ug/L	4.0	0.92	
QC Batch ID: B028841						
Perchlorate	B028841-BLK1	ND	ug/L	4.0	0.92	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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		
QC Batch ID: B028208											
Perchlorate	B028208-BS1	LCS	8.8826	10.000	ug/L	88.8		85	115		
QC Batch ID: B028841											
Perchlorate	B028841-BS1	LCS	10.101	10.000	ug/L	101		85	115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	RPD	
QC Batch ID: B028208		Used client sample: N								
Perchlorate	DUP	1833428-01	ND	ND		ug/L			15	
	MS	1833428-01	ND	8.9551	10.101	ug/L		88.7		80 - 120
	MSD	1833428-01	ND	8.9166	10.101	ug/L	0.4	88.3	15	80 - 120
QC Batch ID: B028841		Used client sample: N								
Perchlorate	DUP	1833429-01	2.9433	2.9115		ug/L	1.1		15	J
	MS	1833429-01	2.9433	14.310	10.101	ug/L		113		80 - 120
	MSD	1833429-01	2.9433	14.990	10.101	ug/L	4.6	119	15	80 - 120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B027965						
Hexavalent Chromium	B027965-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B027966						
Hexavalent Chromium	B027966-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028112						
Total Recoverable Chromium	B028112-BLK2	ND	ug/L	3.0	0.50	
QC Batch ID: B028306						
Total Recoverable Chromium	B028306-BLK1	0.57700	ug/L	3.0	0.50	J

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027965										
Hexavalent Chromium	B027965-BS1	LCS	0.053907	0.050000	mg/L	108		85 - 115		
QC Batch ID: B027966										
Hexavalent Chromium	B027966-BS1	LCS	0.053857	0.050000	mg/L	108		85 - 115		
QC Batch ID: B028112										
Total Recoverable Chromium	B028112-BS2	LCS	43.361	40.000	ug/L	108		85 - 115		
QC Batch ID: B028306										
Total Recoverable Chromium	B028306-BS1	LCS	40.459	40.000	ug/L	101		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027965		Used client sample: Y - Description: MW-3-5, 10/17/2018 07:35								
Hexavalent Chromium	DUP	1832779-02	ND	ND		mg/L			10	
	MS	1832779-02	ND	0.055508	0.052632	mg/L		105		85 - 115
	MSD	1832779-02	ND	0.055712	0.052632	mg/L	0.4	106	10	85 - 115
QC Batch ID: B027966		Used client sample: Y - Description: MW-17-2, 10/17/2018 13:15								
Hexavalent Chromium	DUP	1832779-11	ND	ND		mg/L			10	
	MS	1832779-11	ND	0.055577	0.052632	mg/L		106		85 - 115
	MSD	1832779-11	ND	0.056351	0.052632	mg/L	1.4	107	10	85 - 115
QC Batch ID: B028112		Used client sample: Y - Description: DUP-3-4Q18, 10/17/2018 13:25								
Total Recoverable Chromium	DUP	1832779-12	ND	1.3920		ug/L			20	J
	MS	1832779-12	ND	44.984	40.000	ug/L		112		70 - 130
	MSD	1832779-12	ND	44.351	40.000	ug/L	1.4	111	20	70 - 130
QC Batch ID: B028306		Used client sample: Y - Description: MW-3-5, 10/17/2018 07:35								
Total Recoverable Chromium	DUP	1832779-02	1.7140	1.6220		ug/L	5.5		20	J
	MS	1832779-02	1.7140	40.774	40.000	ug/L		97.6		70 - 130
	MSD	1832779-02	1.7140	41.809	40.000	ug/L	2.5	100	20	70 - 130

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/08/2018 14:20
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 11/07/2018

David Conner

Tidewater Inc.

3761 Attucks Drive
Powell, OH 43065

Client Project: 4Q18
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1832950
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/18/2018. 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
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@tdeloh2o.net
Submission #: 18-32950

Project Description: JPL-GW Monitoring
Project Code: 4Q18
Sampler (s): Blaine Tech

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	Total Cr (200.8)	Perchlorate (EPA 314.0)	Chloride, Nitrate, Sulfate (300)	Orthophosphate (365.1)	Nitrite (353.2)	Hexavalent Cr (7196)
-1	TB-4-101818	10/18/18	0700	GW	X	X	X	X	X	X	X
-2	MW-22-5		0745	GW	X	X	X	X	X	X	X
-3	MW-22-4		0815	GW	X	X	X	X	X	X	X
-4	MW-22-3		0840	GW	X	X	X	X	X	X	X
-5	MW-22-2		0910	GW	X	X	X	X	X	X	X
-6	MW-22-1		0940	GW	X	X	X	X	X	X	X
-7	MW-24-5		1230	GW	X	X	X	X	X	X	X
-8	MW-24-4		1200	GW	X	X	X	X	X	X	X
-9	MW-24-3		1315	GW	X	X	X	X	X	X	X
-10	MW-24-2		1335	GW	X	X	X	X	X	X	X
-11	MW-24-1		1415	GW	X	X	X	X	X	X	X

Notes:
 CHECK BY: DISTRIBUTION
 JUKMAN
 Level IV
 HOLDING TIME
 NO. (NO) OF SS
 96
 0.0 5.00 MBAS COT

Billing
Client: Tidewater, Inc.
Attn: David Conner
Address: 3761 Allucks 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 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: 10/18/18 Time: 1450
 2. Requisitioned By: _____ Date: 10/18/18 Time: 1640
 3. Requisitioned By: _____ Date: 10/18/18 Time: 1640

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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Page 2 of 2

Chain of Custody Form



Required Fields

Report To: Tidewater, Inc.
 Client: Tidewater, Inc.
 Attn: David Conner
 Street Address: 3761 Attucks Drive
 City: Powell State: OH Zip: 43085
 Phone: (626) 299-5715 Fax: (614) 792-2897
 Email Address: david.conner@tidewater.net
 Submission #: 18-32950

Project Description: JPL-GW Monitoring
 Project Code: 4Q18
 Sampler (s): Blaine Tech

Analysis Requested

Hexavalent Cr (7196)	
Nitrite (353.2)	
Orthophosphate (365.1)	
Chloride, Nitrate, Sulfate (300)	
Perchlorate (EPA 314.0)	X
Total Cr (200.8)	X
VOCs EPA 524.2	X

Date: 10/18/18 Time: 1100 Matrix: 6W

Sample # 12 EB-4-101818

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: [Signature]

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: [Signature]

1. Relinquished By: [Signature] Date: 10/18/18 Time: 1450
 2. Received By: [Signature] Date: 10/18/18 Time: 1640
 3. Received By: [Signature] Date: 10/18/18 Time: 1640

Billing: Client: Tidewater, Inc. Attn: David Conner Address: 3761 Attucks Drive City: Powell State: OH Zip: 43085

Are there any tests with holding times less than or equal to 48 hours? Yes No

*Standard Turnaround = 10

Notes

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 #: 1832950

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

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: Glass. Thermometer ID: T1208. Date/Time: 10/18/18. Temperature: (A) 0.3 °C / (C) 20 °C. Analyst Init: cas

Table with columns for Sample Containers and Sample Numbers (1-10). Rows include various sample types like QT FE UNPRES, INORGANIC CHEMICAL METALS, PT CYANIDE, etc.

Comments: Sample Numbering Completed By: GSP Date/Time: 10/18/18 1842 Rev 21 05/23/2016



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 2

Submission #: 1832950

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 N / 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: Chip Thermometer ID: TH208 Date/Time: 10/18/12 @ 1710

Temperature: (A) 0.3 °C / (C) 20 °C Analyst Init: cas

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
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										
PLA 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 545										
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: _____

Sample Numbering Completed By: GSP Date/Time: 10/18 1842 Rev 21 05/23/2016

A = Actual / C = Corrected



Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832950-01	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: TB-4-101818 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 07:00 Sample Depth: --- Lab Matrix: Water Sample Type: Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-4-101818 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1832950-02	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-22-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 07:45 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-22-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1832950-03	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-22-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 08:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-22-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832950-04	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-22-3 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 08:40 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-22-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1832950-05	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-22-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 09:10 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-22-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1832950-06	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-22-1 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 09:40 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-22-1 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1832950-07	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-24-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 12:30 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-24-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1832950-08	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-24-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 12:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-24-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1832950-09	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-24-3 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 13:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-24-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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1832950-10	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-24-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 13:35 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-24-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1832950-11	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-24-1 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 14:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-24-1 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1832950-12	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: EB-4-101818 Sampled By: Blaine Tech of BTST	Receive Date: 10/18/2018 16:40 Sampling Date: 10/18/2018 11:00 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-4-101818 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-01	Client Sample Name: JPL, TB-4-101818, 10/18/2018 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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-01	Client Sample Name: JPL, TB-4-101818, 10/18/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-01	Client Sample Name: JPL, TB-4-101818, 10/18/2018 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)	96.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	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	10/21/18 08:44	10/22/18 03:53	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-01	Client Sample Name: JPL, TB-4-101818, 10/18/2018 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	10/21/18 08:44	10/22/18 03:53	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-02	Client Sample Name: JPL, MW-22-5, 10/18/2018 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		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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-02	Client Sample Name: JPL, MW-22-5, 10/18/2018 7:45:00AM, 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
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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-02	Client Sample Name: JPL, MW-22-5, 10/18/2018 7:45:00AM, 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		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)	92.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.4	%	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	10/21/18 08:44	10/22/18 04:16	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-02	Client Sample Name: JPL, MW-22-5, 10/18/2018 7:45:00AM, 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	10/21/18 08:44	10/22/18 04:16	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832950-02	Client Sample Name: JPL, MW-22-5, 10/18/2018 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	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 20:01	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832950-02	Client Sample Name: JPL, MW-22-5, 10/18/2018 7:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.7	ug/L	3.0	0.50	EPA-200.8	1.2	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/18/18 23:40	10/19/18 01:15	MIG	KONE-1	1	B028132
2	EPA-200.8	10/26/18 08:30	10/26/18 16:32	ARD	PE-EL3	1	B028440

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-03	Client Sample Name: JPL, MW-22-4, 10/18/2018 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		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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-03	Client Sample Name: JPL, MW-22-4, 10/18/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-03	Client Sample Name: JPL, MW-22-4, 10/18/2018 8:15:00AM, 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)	96.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.5	%	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	10/21/18 08:44	10/22/18 04:39	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-03	Client Sample Name: JPL, MW-22-4, 10/18/2018 8:15:00AM, 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	10/21/18 08:44	10/22/18 04:39	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832950-03	Client Sample Name: JPL, MW-22-4, 10/18/2018 8:15:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	0.97	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 20:16	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832950-03	Client Sample Name: JPL, MW-22-4, 10/18/2018 8:15:00AM, Blaine Tech							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0030	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	4.2	ug/L	3.0	0.50	EPA-200.8	1.2		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	10/18/18 23:40	10/19/18 01:15	MIG	KONE-1	1	B028132
2	EPA-200.8	10/26/18 08:30	10/26/18 17:00	ARD	PE-EL3	1	B028440

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-04	Client Sample Name: JPL, MW-22-3, 10/18/2018 8:40:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-04	Client Sample Name: JPL, MW-22-3, 10/18/2018 8:40:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-04	Client Sample Name: JPL, MW-22-3, 10/18/2018 8:40:00AM, 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)	99.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	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	10/21/18 08:44	10/22/18 05:02	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-04	Client Sample Name: JPL, MW-22-3, 10/18/2018 8:40:00AM, 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	10/21/18 08:44	10/22/18 05:02	MGC	MS-V5	1	B027892

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832950-04	Client Sample Name: JPL, MW-22-3, 10/18/2018 8:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.9	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 20:31	MIG	IC6	1	B028648

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Tidewater Inc.
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Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832950-04	Client Sample Name: JPL, MW-22-3, 10/18/2018 8:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0018	mg/L	0.0020	0.00070	EPA-7196	ND	J	1
Total Recoverable Chromium	3.1	ug/L	3.0	0.50	EPA-200.8	1.2		2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/18/18 23:40	10/19/18 01:15	MIG	KONE-1	1	B028132
2	EPA-200.8	10/26/18 08:30	10/26/18 17:03	ARD	PE-EL3	1	B028440

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-05	Client Sample Name: JPL, MW-22-2, 10/18/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-05 Client Sample Name: JPL, MW-22-2, 10/18/2018 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
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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-05	Client Sample Name: JPL, MW-22-2, 10/18/2018 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)	99.0	%	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	10/21/18 06:00	10/22/18 10:06	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-05	Client Sample Name: JPL, MW-22-2, 10/18/2018 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	10/21/18 06:00	10/22/18 10:06	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832950-05	Client Sample Name: JPL, MW-22-2, 10/18/2018 9:10:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.5	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 20:47	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832950-05	Client Sample Name: JPL, MW-22-2, 10/18/2018 9:10:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0024	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	3.6	ug/L	3.0	0.50	EPA-200.8	1.2		2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/18/18 23:40	10/19/18 01:15	MIG	KONE-1	1	B028132
2	EPA-200.8	10/26/18 08:30	10/26/18 17:07	ARD	PE-EL3	1	B028440

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID:	1832950-06	Client Sample Name:	JPL, MW-22-1, 10/18/2018 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	0.29	ug/L	0.50	0.14	EPA-524.2	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	

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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-06	Client Sample Name: JPL, MW-22-1, 10/18/2018 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	0.59	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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-06	Client Sample Name: JPL, MW-22-1, 10/18/2018 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)	96.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.4	%	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	10/21/18 06:00	10/22/18 10:30	MGC	MS-V5	1	B027893

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Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-06	Client Sample Name: JPL, MW-22-1, 10/18/2018 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	10/21/18 06:00	10/22/18 10:30	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832950-06	Client Sample Name: JPL, MW-22-1, 10/18/2018 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.6	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 21:02	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832950-06	Client Sample Name: JPL, MW-22-1, 10/18/2018 9:40:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00089	mg/L	0.0020	0.00070	EPA-7196	ND	J	1
Total Recoverable Chromium	2.6	ug/L	3.0	0.50	EPA-200.8	1.2	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/18/18 23:40	10/19/18 01:48	MIG	KONE-1	1	B028132
2	EPA-200.8	10/26/18 08:30	10/26/18 17:10	ARD	PE-EL3	1	B028440

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-07	Client Sample Name: JPL, MW-24-5, 10/18/2018 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
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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-07	Client Sample Name: JPL, MW-24-5, 10/18/2018 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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-07	Client Sample Name: JPL, MW-24-5, 10/18/2018 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)	101	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.2	%	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	10/21/18 06:00	10/22/18 10:53	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-07	Client Sample Name: JPL, MW-24-5, 10/18/2018 12:30:00PM, 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	10/21/18 06:00	10/22/18 10:53	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832950-07	Client Sample Name: JPL, MW-24-5, 10/18/2018 12:30:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 21:48	MIG	IC6	1	B028648

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832950-07	Client Sample Name: JPL, MW-24-5, 10/18/2018 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0030	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	6.0	ug/L	3.0	0.50	EPA-200.8	1.2		2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/18/18 23:40	10/19/18 01:49	MIG	KONE-1	1	B028132
2	EPA-200.8	10/26/18 08:30	10/26/18 17:13	ARD	PE-EL3	1	B028440

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Tidewater Inc.
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Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-08	Client Sample Name: JPL, MW-24-4, 10/18/2018 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
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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-08	Client Sample Name: JPL, MW-24-4, 10/18/2018 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	0.15	ug/L	0.50	0.15	EPA-524.2	ND	J	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	0.24	ug/L	0.50	0.12	EPA-524.2	ND	J	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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-08	Client Sample Name: JPL, MW-24-4, 10/18/2018 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)	93.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.2	%	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	10/21/18 06:00	10/22/18 11:16	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-08	Client Sample Name: JPL, MW-24-4, 10/18/2018 12:00:00PM, 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	10/21/18 06:00	10/22/18 11:16	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832950-08	Client Sample Name: JPL, MW-24-4, 10/18/2018 12:00:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 22:03	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832950-08	Client Sample Name: JPL, MW-24-4, 10/18/2018 12:00:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	2.7	ug/L	3.0	0.50	EPA-200.8	1.2	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/18/18 23:40	10/19/18 01:49	MIG	KONE-1	1	B028132
2	EPA-200.8	10/26/18 08:30	10/26/18 17:17	ARD	PE-EL3	1	B028440

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-09	Client Sample Name: JPL, MW-24-3, 10/18/2018 1:15:00PM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-09	Client Sample Name: JPL, MW-24-3, 10/18/2018 1:15:00PM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-09	Client Sample Name: JPL, MW-24-3, 10/18/2018 1:15:00PM, 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)	96.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	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	10/21/18 06:00	10/22/18 11:39	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-09	Client Sample Name: JPL, MW-24-3, 10/18/2018 1:15:00PM, 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	10/21/18 06:00	10/22/18 11:39	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832950-09	Client Sample Name: JPL, MW-24-3, 10/18/2018 1:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 22:19	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832950-09	Client Sample Name: JPL, MW-24-3, 10/18/2018 1:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00080	mg/L	0.0020	0.00070	EPA-7196	ND	J	1
Total Recoverable Chromium	2.9	ug/L	3.0	0.50	EPA-200.8	1.2	J	2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/18/18 23:40	10/19/18 01:48		MIG	KONE-1	1	B028132
2	EPA-200.8	10/26/18 08:30	10/26/18 17:20		ARD	PE-EL3	1	B028440

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-10	Client Sample Name: JPL, MW-24-2, 10/18/2018 1:35:00PM, 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	0.20	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-10	Client Sample Name: JPL, MW-24-2, 10/18/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-10	Client Sample Name: JPL, MW-24-2, 10/18/2018 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		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)	96.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.4	%	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	10/21/18 06:00	10/22/18 12:02	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-10	Client Sample Name: JPL, MW-24-2, 10/18/2018 1:35:00PM, 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	10/21/18 06:00	10/22/18 12:02	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832950-10	Client Sample Name: JPL, MW-24-2, 10/18/2018 1:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.4	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 22:34	MIG	IC6	1	B028648

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832950-10	Client Sample Name: JPL, MW-24-2, 10/18/2018 1:35:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0025	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	4.4	ug/L	3.0	0.50	EPA-200.8	1.2		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/18/18 23:40	10/19/18 02:02		MIG	KONE-1	1	B028133
2	EPA-200.8	10/26/18 08:30	10/26/18 17:24		ARD	PE-EL3	1	B028440

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-11	Client Sample Name: JPL, MW-24-1, 10/18/2018 2:15:00PM, 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	0.21	ug/L	0.50	0.20	EPA-524.2	ND	J	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	1.8	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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-11	Client Sample Name: JPL, MW-24-1, 10/18/2018 2:15:00PM, 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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-11	Client Sample Name: JPL, MW-24-1, 10/18/2018 2:15:00PM, 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)	99.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.1	%	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	10/21/18 06:00	10/22/18 12:25	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-11	Client Sample Name: JPL, MW-24-1, 10/18/2018 2:15:00PM, 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	10/21/18 06:00	10/22/18 12:25	MGC	MS-V5	1	B027893

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832950-11	Client Sample Name: JPL, MW-24-1, 10/18/2018 2:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	96	mg/L	0.50	0.077	EPA-300.0	ND		1
Nitrate as N	1.8	mg/L	0.10	0.021	EPA-300.0	ND		1
Sulfate	52	mg/L	1.0	0.13	EPA-300.0	ND		1
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		2
Perchlorate	4.4	ug/L	4.0	0.92	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	10/18/18 20:00	10/19/18 04:09	SAV	IC1	1	B027830
2	EPA-353.2	10/19/18 07:37	10/19/18 08:05	MC1	KONE-1	1	B028321
3	EPA-314.0	10/29/18 09:00	10/29/18 22:49	MIG	IC6	1	B028648
4	EPA-365.1	10/19/18 07:30	10/19/18 07:39	MC1	SC-1	1	B028351

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832950-11	Client Sample Name: JPL, MW-24-1, 10/18/2018 2:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	3.0	ug/L	3.0	0.50	EPA-200.8	1.2		2

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-7196	10/18/18 23:40	10/19/18 02:02		MIG	KONE-1	1	B028133
2	EPA-200.8	10/26/18 08:30	10/26/18 17:27		ARD	PE-EL3	1	B028440

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-12	Client Sample Name: JPL, EB-4-101818, 10/18/2018 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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-12	Client Sample Name: JPL, EB-4-101818, 10/18/2018 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: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1832950-12	Client Sample Name: JPL, EB-4-101818, 10/18/2018 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)	101	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.7	%	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	10/21/18 06:00	10/22/18 12:48	MGC	MS-V5	1	B027893

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1832950-12	Client Sample Name: JPL, EB-4-101818, 10/18/2018 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	10/21/18 06:00	10/22/18 12:48	MGC	MS-V5	1	B027893

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Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1832950-12	Client Sample Name: JPL, EB-4-101818, 10/18/2018 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	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/29/18 23:05	MIG	IC6	1	B028648

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Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1832950-12	Client Sample Name: JPL, EB-4-101818, 10/18/2018 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	0.0020	0.00070	EPA-7196	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-7196	10/18/18 23:40	10/19/18 02:02		MIG	KONE-1	1	B028133
2	EPA-200.8	10/25/18 20:15	10/26/18 11:46		JNC	PE-EL2	1	B028407

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Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027892						
Benzene	B027892-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B027892-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B027892-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B027892-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B027892-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B027892-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B027892-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B027892-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B027892-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B027892-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B027892-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B027892-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B027892-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B027892-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B027892-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B027892-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B027892-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B027892-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B027892-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B027892-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B027892-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B027892-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B027892-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B027892-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B027892-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B027892-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B027892-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B027892-BLK1	ND	ug/L	0.50	0.14	

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Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027892						
trans-1,3-Dichloropropene	B027892-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B027892-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B027892-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B027892-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B027892-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B027892-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B027892-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B027892-BLK1	ND	ug/L	0.50	0.12	
Styrene	B027892-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B027892-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B027892-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B027892-BLK1	ND	ug/L	0.50	0.23	
Toluene	B027892-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B027892-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B027892-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B027892-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B027892-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B027892-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B027892-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B027892-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B027892-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B027892-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B027892-BLK1	ND	ug/L	0.50	0.18	
Acetone	B027892-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B027892-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B027892-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B027892-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B027892-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B027892-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B027892-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B027892-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B027892-BLK1	ND	ug/L	4.0	1.3	

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Powell, OH 43065

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Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027892						
Ethyl t-butyl ether	B027892-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B027892-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B027892-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B027892-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B027892-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B027892-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B027892-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B027892-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B027892-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B027892-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B027892-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B027892-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B027892-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B027892-BLK1	87.0	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B027892-BLK1	103	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B027892-BLK1	97.4	%	80 - 120 (LCL - UCL)		
QC Batch ID: B027893						
Benzene	B027893-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B027893-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B027893-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B027893-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B027893-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B027893-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B027893-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B027893-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B027893-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B027893-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B027893-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B027893-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B027893-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B027893-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B027893-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B027893-BLK1	ND	ug/L	0.50	0.093	

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Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Table with 7 columns: Constituent, QC Sample ID, MB Result, Units, PQL, MDL, Lab Quals. Includes a QC Batch ID: B027893 and a list of 30 chemical constituents with their respective results.

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Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027893						
1,1,1-Trichloroethane	B027893-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B027893-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B027893-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B027893-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B027893-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B027893-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B027893-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B027893-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B027893-BLK1	ND	ug/L	0.50	0.18	
Acetone	B027893-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B027893-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B027893-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B027893-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B027893-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B027893-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B027893-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B027893-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B027893-BLK1	ND	ug/L	4.0	1.3	
Ethyl t-butyl ether	B027893-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B027893-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B027893-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B027893-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B027893-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B027893-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B027893-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B027893-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B027893-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B027893-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B027893-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B027893-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B027893-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B027893-BLK1	90.3	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B027893-BLK1	98.1	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B027893-BLK1	99.3	%	80 - 120 (LCL - UCL)		

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Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027892										
Benzene	B027892-BS1	LCS	24.820	25.000	ug/L	99.3		70 - 130		
Bromodichloromethane	B027892-BS1	LCS	25.470	25.000	ug/L	102		70 - 130		
Chlorobenzene	B027892-BS1	LCS	23.350	25.000	ug/L	93.4		70 - 130		
Chloroethane	B027892-BS1	LCS	27.580	25.000	ug/L	110		70 - 130		
1,4-Dichlorobenzene	B027892-BS1	LCS	23.150	25.000	ug/L	92.6		70 - 130		
1,1-Dichloroethane	B027892-BS1	LCS	27.550	25.000	ug/L	110		70 - 130		
1,1-Dichloroethene	B027892-BS1	LCS	26.050	25.000	ug/L	104		70 - 130		
Toluene	B027892-BS1	LCS	24.600	25.000	ug/L	98.4		70 - 130		
Trichloroethene	B027892-BS1	LCS	25.100	25.000	ug/L	100		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B027892-BS1	LCS	8.5600	10.000	ug/L	85.6		75 - 125		
Toluene-d8 (Surrogate)	B027892-BS1	LCS	10.020	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	B027892-BS1	LCS	9.5300	10.000	ug/L	95.3		80 - 120		

QC Batch ID: B027893										
Benzene	B027893-BS1	LCS	25.210	25.000	ug/L	101		70 - 130		
Bromodichloromethane	B027893-BS1	LCS	27.160	25.000	ug/L	109		70 - 130		
Chlorobenzene	B027893-BS1	LCS	22.920	25.000	ug/L	91.7		70 - 130		
Chloroethane	B027893-BS1	LCS	27.180	25.000	ug/L	109		70 - 130		
1,4-Dichlorobenzene	B027893-BS1	LCS	23.670	25.000	ug/L	94.7		70 - 130		
1,1-Dichloroethane	B027893-BS1	LCS	28.320	25.000	ug/L	113		70 - 130		
1,1-Dichloroethene	B027893-BS1	LCS	27.210	25.000	ug/L	109		70 - 130		
Toluene	B027893-BS1	LCS	24.210	25.000	ug/L	96.8		70 - 130		
Trichloroethene	B027893-BS1	LCS	24.480	25.000	ug/L	97.9		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B027893-BS1	LCS	9.3500	10.000	ug/L	93.5		75 - 125		
Toluene-d8 (Surrogate)	B027893-BS1	LCS	9.7000	10.000	ug/L	97.0		80 - 120		
4-Bromofluorobenzene (Surrogate)	B027893-BS1	LCS	9.1300	10.000	ug/L	91.3		80 - 120		

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Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B027892 and Used client sample: Y - Description: MW-14-4, 10/16/2018 08:15.

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: B027893 and Used client sample: Y - Description: MW-25-3, 10/16/2018 12:15.

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027893		Used client sample: Y - Description: MW-25-3, 10/16/2018 12:15								
1,1-Dichloroethene	MS	1832621-08	ND	29.020	25.000	ug/L		116		70 - 130
	MSD	1832621-08	ND	29.000	25.000	ug/L	0.1	116	20	70 - 130
Toluene	MS	1832621-08	ND	26.040	25.000	ug/L		104		70 - 130
	MSD	1832621-08	ND	25.450	25.000	ug/L	2.3	102	20	70 - 130
Trichloroethene	MS	1832621-08	ND	25.960	25.000	ug/L		104		70 - 130
	MSD	1832621-08	ND	26.420	25.000	ug/L	1.8	106	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1832621-08	ND	9.5000	10.000	ug/L		95.0		75 - 125
	MSD	1832621-08	ND	9.6300	10.000	ug/L	1.4	96.3		75 - 125
Toluene-d8 (Surrogate)	MS	1832621-08	ND	10.210	10.000	ug/L		102		80 - 120
	MSD	1832621-08	ND	9.9300	10.000	ug/L	2.8	99.3		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1832621-08	ND	9.6700	10.000	ug/L		96.7		80 - 120
	MSD	1832621-08	ND	9.7700	10.000	ug/L	1.0	97.7		80 - 120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027892						
Chloroacetonitrile	B027892-BLK1	0	ug/L			
1-Chlorobutane	B027892-BLK1	0	ug/L			
1,1-Dichloropropanone	B027892-BLK1	0	ug/L			
Methyl acrylate	B027892-BLK1	0	ug/L			
Nitrobenzene	B027892-BLK1	0	ug/L			
2-Nitropropane	B027892-BLK1	0	ug/L			
QC Batch ID: B027893						
Chloroacetonitrile	B027893-BLK1	0	ug/L			
1-Chlorobutane	B027893-BLK1	0	ug/L			
1,1-Dichloropropanone	B027893-BLK1	0	ug/L			
Methyl acrylate	B027893-BLK1	0	ug/L			
Nitrobenzene	B027893-BLK1	0	ug/L			
2-Nitropropane	B027893-BLK1	0	ug/L			

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B027830						
Chloride	B027830-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B027830-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B027830-BLK1	ND	mg/L	1.0	0.13	
QC Batch ID: B028321						
Nitrite as N	B028321-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: B028351						
ortho-Phosphate as P	B028351-BLK1	ND	mg/L	0.050	0.017	
QC Batch ID: B028648						
Perchlorate	B028648-BLK1	ND	ug/L	4.0	0.92	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027830										
Chloride	B027830-BS1	LCS	48.690	50.000	mg/L	97.4		90 - 110		
Nitrate as N	B027830-BS1	LCS	4.8830	5.0000	mg/L	97.7		90 - 110		
Sulfate	B027830-BS1	LCS	97.637	100.00	mg/L	97.6		90 - 110		
QC Batch ID: B028321										
Nitrite as N	B028321-BS1	LCS	0.48858	0.50000	mg/L	97.7		90 - 110		
QC Batch ID: B028351										
ortho-Phosphate as P	B028351-BS1	LCS	0.50190	0.50000	mg/L	100		90 - 110		
QC Batch ID: B028648										
Perchlorate	B028648-BS1	LCS	10.739	10.000	ug/L	107		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B027830		Used client sample: N								
Chloride	DUP	1832953-03	121.52	121.76		mg/L	0.2		10	
	MS	1832953-03	121.52	167.50	50.505	mg/L		91.0		80 - 120
	MSD	1832953-03	121.52	168.29	50.505	mg/L	0.5	92.6	10	80 - 120
Nitrate as N	DUP	1832953-03	4.4720	4.6840		mg/L	4.6		10	
	MS	1832953-03	4.4720	8.9354	5.0505	mg/L		88.4		80 - 120
	MSD	1832953-03	4.4720	9.1152	5.0505	mg/L	2.0	91.9	10	80 - 120
Sulfate	DUP	1832953-03	92.019	93.259		mg/L	1.3		10	
	MS	1832953-03	92.019	194.28	101.01	mg/L		101		80 - 120
	MSD	1832953-03	92.019	194.99	101.01	mg/L	0.4	102	10	80 - 120
QC Batch ID: B028321		Used client sample: N								
Nitrite as N	DUP	1832987-01	0.14839	0.15026		mg/L	1.3		10	
	MS	1832987-01	0.14839	0.60711	0.50000	mg/L		91.7		90 - 110
	MSD	1832987-01	0.14839	0.61091	0.50000	mg/L	0.6	92.5	10	90 - 110
QC Batch ID: B028351		Used client sample: Y - Description: MW-24-1, 10/18/2018 14:15								
ortho-Phosphate as P	DUP	1832950-11	ND	ND		mg/L			10	
	MS	1832950-11	ND	0.53842	0.52632	mg/L		102		90 - 110
	MSD	1832950-11	ND	0.53400	0.52632	mg/L	0.8	101	10	90 - 110
QC Batch ID: B028648		Used client sample: Y - Description: MW-14-4, 10/16/2018 08:15								
Perchlorate	DUP	1832621-03	4.1718	4.1714		ug/L	0.0		15	
	MS	1832621-03	4.1718	14.678	10.101	ug/L		104		80 - 120
	MSD	1832621-03	4.1718	14.640	10.101	ug/L	0.3	104	15	80 - 120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B028132						
Hexavalent Chromium	B028132-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028133						
Hexavalent Chromium	B028133-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028407						
Total Recoverable Chromium	B028407-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B028440						
Total Recoverable Chromium	B028440-BLK1	1.2290	ug/L	3.0	0.50	J

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028132										
Hexavalent Chromium	B028132-BS1	LCS	0.053862	0.050000	mg/L	108		85 - 115		
QC Batch ID: B028133										
Hexavalent Chromium	B028133-BS1	LCS	0.052849	0.050000	mg/L	106		85 - 115		
QC Batch ID: B028407										
Total Recoverable Chromium	B028407-BS1	LCS	41.367	40.000	ug/L	103		85 - 115		
QC Batch ID: B028440										
Total Recoverable Chromium	B028440-BS1	LCS	42.884	40.000	ug/L	107		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028132		Used client sample: Y - Description: MW-22-5, 10/18/2018 07:45								
Hexavalent Chromium	DUP	1832950-02	ND	ND		mg/L			10	
	MS	1832950-02	ND	0.051888	0.052632	mg/L		98.6		85 - 115
	MSD	1832950-02	ND	0.054037	0.052632	mg/L	4.1	103	10	85 - 115
QC Batch ID: B028133		Used client sample: Y - Description: MW-24-2, 10/18/2018 13:35								
Hexavalent Chromium	DUP	1832950-10	0.0025290	0.0025020		mg/L	1.1		10	
	MS	1832950-10	0.0025290	0.059604	0.052632	mg/L		108		85 - 115
	MSD	1832950-10	0.0025290	0.058661	0.052632	mg/L	1.6	107	10	85 - 115
QC Batch ID: B028407		Used client sample: Y - Description: EB-4-101818, 10/18/2018 11:00								
Total Recoverable Chromium	DUP	1832950-12	ND	ND		ug/L			20	
	MS	1832950-12	ND	42.928	40.000	ug/L		107		70 - 130
	MSD	1832950-12	ND	41.771	40.000	ug/L	2.7	104	20	70 - 130
QC Batch ID: B028440		Used client sample: Y - Description: MW-22-5, 10/18/2018 07:45								
Total Recoverable Chromium	DUP	1832950-02	1.6830	1.7520		ug/L	4.0		20	J
	MS	1832950-02	1.6830	42.365	40.000	ug/L		102		70 - 130
	MSD	1832950-02	1.6830	41.836	40.000	ug/L	1.3	100	20	70 - 130

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/07/2018 22:40
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 11/01/2018

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 4Q18
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1833239
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/22/2018. 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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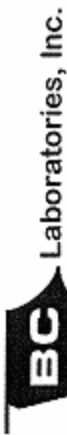
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Chain of Custody Form

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Report To: Tidewater, Inc. **Client:** Tidewater, Inc. **Project Description:** JPL-GW Monitoring

Attn: David Conner **Attn:** David Conner **Project Code:** 4Q18

Street Address: 3761 Attucks Drive **City:** Powell **State:** OH **Zip:** 43065

Phone: 626 | 288 - 5715 **Fax:** 614 | 792 - 2897 **Sampler (s):** Blaine Tech

Email Address: david.conner@ldeht2o.net

Submission #: 18-33239

Sample #	Sample Description	Date	Time	Matrix*
-1	TR-5-102218	10/22/18	0700	GW
-2	MW-18-5		0750	GW
-3	MW-18-4		0815	GW
-4	MW-18-3		0845	GW
-5	MW-18-2		0920	GW
-6	MW-21-5		1040	GW
-7	MW-21-4		1100	GW
-8	MW-21-3		1200	GW
-9	MW-21-2		1200	GW
-10	DVP-4-4018		1210	GW
-11	EB-5-102218		1220	GW

Analysis Requested:

VOCs EPA 524.2	X
Total Cr (200.8)	X
Perchlorate (EPA 314.0)	X
Chloride, Nitrate, Sulfate (300)	X
Orthophosphate (365.1)	X
Nitrite (353.2)	X
Hexavalent Cr (7195)	X

Notes: Level IV

CHK BY: DISTRIBUTION
JULIA VAS

SHORT HOLDING TIME

DO 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 QC)

Global ID: _____

1. Relinquished By: _____ **Date:** 10-22-18 **Time:** 1345

2. Relinquished By: _____ **Date:** 10-22-18 **Time:** 1750

3. Relinquished By: _____ **Date:** 10-22-18 **Time:** 1750

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (561) 327 - 4911 Fax: (661) 327 - 1918 www.bclabs.com

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Chain of Custody Form

Report To: **Tidewater, Inc.**
 Client: **Tidewater, Inc.**
 Attn: **David Conner**
 Street Address: **3761 Altucks Drive**
 City: **Powell** State: **OH** Zip: **43085**
 Phone: **(626) 298-5715** Fax: **(614) 792-2897**
 Email Address: **david.conner@tidwh2o.net**
 Submission #: **18-33239**

Project Description: **JPL-GW Monitoring**
 Project Code: **4Q18**
 Sampler(s): **Blaine Tech**

Analysis Requested:
 VOCs EPA 524.2
 Total Cr (200.8)
 Perchlorate (EPA 314.0)
 Chloride, Nitrate, Sulfate (300)
 Orthophosphate (365.1)
 Nitrite (353.2)
 Hexavalent Cr (719)

Matrix: **GW**
 Date: **10/22/18** Time: **1230**

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 (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 GC)

Global ID: **10-22-18-17343**
 1. Relinquished by: **[Signature]** Date: **10/22/18** Time: **1345**
 2. Relinquished by: **[Signature]** Date: **10/22/18** Time: **1750**
 3. Received by: **[Signature]** Date: **10/22/18** Time: **1750**

Page 2 of 2

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 3

Submission #: 1833239

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: PE Thermometer ID: 208 Date/Time: 10/22 1750

Temperature: (A) 2.7 °C (C) 2.4 °C Analyst Init: GSP

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES				D	D	D		D		
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz				E	E	E		E		
PT CYANIDE										
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		ABC	ABC	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 SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: _____

Sample Numbering Completed By: GSP Date/Time: 10/22 1850 Rev 21 05/23/2016

A = Actual / C = Corrected

(S:\WP\Doc\WordPerfect\LAB_DOC5\FORMS\ISAMECrev 20)



BC LABORATORIES INC. COOLER RECEIPT FORM Page 4 of 5

Submission #: 18-33239

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

SHIPPING CONTAINER
Ice Chest [x] None [] Box []
Other [] (Specify)

FREE LIQUID
YES [] NO [x]
W / S

Refrigerant: Ice [x] Blue Ice [] None [] Other [] Comments:

Custody Seals: [] Containers: [] None [x] Comments:

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

COC Received
YES [x] NO []

Emissivity: 0.98 Container: PE Thermometer ID: 208
Temperature: (A) 2.7 °C (IC) 2.4 °C

Date/Time 10/22/17 5:00
Analyst Init GSP

Table with columns for Sample Containers and Sample Numbers (1-10). Rows include various sample types like QT PE UNPRES, PT CYANIDE, etc.

Comments:
Sample Numbering Completed By: GSP Date/Time: 10/22/17 5:00
A = Actual / C = Corrected



BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 3

Submission #: 18-33239

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 Chests, 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: PE. Thermometer ID: 206. Date/Time: 10/22/1750. Analyst Init: GSP. Temperature: (A) 0.8 °C / (C) 0.5 °C.

Table with columns for Sample Containers and Sample Numbers (1-10). Rows include various sample types like QT PE UNPRES, INORGANIC CHEMICAL METALS, etc.

Comments: Sample Numbering Completed By: [Signature] Date/Time: 10/22/1850 Rev 21 05/23/2016



Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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1833239-01	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: TB-5-102218 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 07:00 Sample Depth: --- Lab Matrix: Water Sample Type: Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-5-102218 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1833239-02	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-18-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 07:50 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-18-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1833239-03	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-18-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 08:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-18-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833239-04	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-18-3 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 08:45 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-18-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1833239-05	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-18-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 09:20 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-18-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1833239-06	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-21-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 10:40 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-21-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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1833239-07	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-21-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 11:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-21-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1833239-08	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-21-3 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 11:20 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-21-3 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1833239-09	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-21-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 12:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-21-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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1833239-10	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: DUP-4-4Q18 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 12:10 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-4-4Q18 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1833239-11	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: EB-5-102218 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 12:20 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-5-102218 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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1833239-12	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: SB-2-102218 Sampled By: Blaine Tech of BTST	Receive Date: 10/22/2018 17:50 Sampling Date: 10/22/2018 12:30 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): SB-2-102218 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-01	Client Sample Name: JPL, TB-5-102218, 10/22/2018 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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-01	Client Sample Name: JPL, TB-5-102218, 10/22/2018 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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-01	Client Sample Name: JPL, TB-5-102218, 10/22/2018 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)	96.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.8	%	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	10/27/18 09:00	10/27/18 22:23	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-01	Client Sample Name: JPL, TB-5-102218, 10/22/2018 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	10/27/18 09:00	10/27/18 22:23	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-02	Client Sample Name: JPL, MW-18-5, 10/22/2018 7:50:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-02	Client Sample Name: JPL, MW-18-5, 10/22/2018 7:50:00AM, 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	0.14	ug/L	0.50	0.12	EPA-524.2	ND	J	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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-02	Client Sample Name: JPL, MW-18-5, 10/22/2018 7:50:00AM, 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		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)	97.2	%	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	10/27/18 09:00	10/27/18 22:46	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-02	Client Sample Name: JPL, MW-18-5, 10/22/2018 7:50:00AM, 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	10/27/18 09:00	10/27/18 22:46	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833239-02	Client Sample Name: JPL, MW-18-5, 10/22/2018 7:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/30/18 02:54	TMS	IC6	1	B028649

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833239-02	Client Sample Name: JPL, MW-18-5, 10/22/2018 7:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/22/18 19:12	10/22/18 19:35		MIG	KONE-1	1	B028364
2	EPA-200.8	10/29/18 09:00	11/01/18 02:03		ARD	PE-EL4	1	B028596

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-03	Client Sample Name: JPL, MW-18-4, 10/22/2018 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	1.5	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	0.71	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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-03	Client Sample Name: JPL, MW-18-4, 10/22/2018 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	0.59	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	0.81	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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-03	Client Sample Name: JPL, MW-18-4, 10/22/2018 8:15:00AM, 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)	99.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.2	%	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	10/27/18 09:00	10/27/18 23:10	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-03	Client Sample Name: JPL, MW-18-4, 10/22/2018 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	10/27/18 09:00	10/27/18 23:10	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833239-03	Client Sample Name: JPL, MW-18-4, 10/22/2018 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	16	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/30/18 03:10	TMS	IC6	1	B028649

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833239-03	Client Sample Name: JPL, MW-18-4, 10/22/2018 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0023	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	2.8	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-7196	10/22/18 19:12	10/22/18 19:35		MIG	KONE-1	1	B028364
2	EPA-200.8	10/29/18 09:00	11/01/18 02:32		ARD	PE-EL4	1	B028596

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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-04	Client Sample Name: JPL, MW-18-3, 10/22/2018 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		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	0.30	ug/L	0.50	0.17	EPA-524.2	ND	J	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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-04	Client Sample Name: JPL, MW-18-3, 10/22/2018 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
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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-04 **Client Sample Name:** JPL, MW-18-3, 10/22/2018 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)	98.0	%	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	10/27/18 09:00	10/27/18 23:33	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-04	Client Sample Name: JPL, MW-18-3, 10/22/2018 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	10/27/18 09:00	10/27/18 23:33	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833239-04	Client Sample Name: JPL, MW-18-3, 10/22/2018 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.6	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/30/18 03:25	TMS	IC6	1	B028649

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833239-04	Client Sample Name: JPL, MW-18-3, 10/22/2018 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0018	mg/L	0.0020	0.00070	EPA-7196	ND	J	1
Total Recoverable Chromium	1.1	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-7196	10/22/18 19:12	10/22/18 19:35		MIG	KONE-1	1	B028364
2	EPA-200.8	10/29/18 09:00	11/01/18 02:35		ARD	PE-EL4	1	B028596

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Tidewater Inc.
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Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-05	Client Sample Name: JPL, MW-18-2, 10/22/2018 9:20:00AM, 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		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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-05	Client Sample Name: JPL, MW-18-2, 10/22/2018 9:20:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-05	Client Sample Name: JPL, MW-18-2, 10/22/2018 9:20:00AM, 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)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.2	%	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	10/27/18 09:00	10/27/18 23:56	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-05	Client Sample Name: JPL, MW-18-2, 10/22/2018 9:20:00AM, 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	10/27/18 09:00	10/27/18 23:56	MGC	MS-V5	1	B028563

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833239-05	Client Sample Name: JPL, MW-18-2, 10/22/2018 9:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/30/18 04:11	TMS	IC6	1	B028649

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Tidewater Inc.
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Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833239-05	Client Sample Name: JPL, MW-18-2, 10/22/2018 9:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/22/18 19:12	10/22/18 19:35		MIG	KONE-1	1	B028364
2	EPA-200.8	10/29/18 09:00	11/01/18 02:38		ARD	PE-EL4	1	B028596

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-06	Client Sample Name: JPL, MW-21-5, 10/22/2018 10:40:00AM, 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	5.9	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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-06	Client Sample Name: JPL, MW-21-5, 10/22/2018 10:40:00AM, 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	0.74	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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-06	Client Sample Name: JPL, MW-21-5, 10/22/2018 10:40:00AM, 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)	100	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	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	10/27/18 09:00	10/28/18 06:51	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-06	Client Sample Name: JPL, MW-21-5, 10/22/2018 10:40:00AM, 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	10/27/18 09:00	10/28/18 06:51	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833239-06	Client Sample Name: JPL, MW-21-5, 10/22/2018 10:40:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.5	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/30/18 04:26	TMS	IC6	1	B028649

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833239-06	Client Sample Name: JPL, MW-21-5, 10/22/2018 10:40:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0014	mg/L	0.0020	0.00070	EPA-7196	ND	J	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-7196	10/22/18 19:12	10/22/18 19:35		MIG	KONE-1	1	B028364
2	EPA-200.8	10/29/18 09:00	11/01/18 02:42		ARD	PE-EL4	1	B028596

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-07	Client Sample Name: JPL, MW-21-4, 10/22/2018 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	4.0	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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-07	Client Sample Name: JPL, MW-21-4, 10/22/2018 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	0.97	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	0.32	ug/L	0.50	0.19	EPA-524.2	ND	J	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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-07	Client Sample Name: JPL, MW-21-4, 10/22/2018 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)	96.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.5	%	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	10/27/18 09:00	10/28/18 07:14	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-07	Client Sample Name: JPL, MW-21-4, 10/22/2018 11:00:00AM, 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	10/27/18 09:00	10/28/18 07:14	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833239-07	Client Sample Name: JPL, MW-21-4, 10/22/2018 11:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.6	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/30/18 04:42	TMS	IC6	1	B028649

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833239-07	Client Sample Name: JPL, MW-21-4, 10/22/2018 11:00:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0016	mg/L	0.0020	0.00070	EPA-7196	ND	J	1
Total Recoverable Chromium	0.79	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-7196	10/22/18 19:12	10/22/18 19:38		MIG	KONE-1	1	B028364
2	EPA-200.8	10/29/18 09:00	11/01/18 02:45		ARD	PE-EL4	1	B028596

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-08		Client Sample Name: JPL, MW-21-3, 10/22/2018 11:20:00AM, 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		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	0.42	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-08	Client Sample Name: JPL, MW-21-3, 10/22/2018 11:20:00AM, 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	0.76	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	0.76	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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-08	Client Sample Name: JPL, MW-21-3, 10/22/2018 11:20:00AM, 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)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.8	%	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	10/27/18 09:00	10/28/18 07:38	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-08	Client Sample Name: JPL, MW-21-3, 10/22/2018 11:20:00AM, 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	10/27/18 09:00	10/28/18 07:38	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833239-08	Client Sample Name: JPL, MW-21-3, 10/22/2018 11:20:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.0	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/30/18 04:57	TMS	IC6	1	B028649

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833239-08	Client Sample Name: JPL, MW-21-3, 10/22/2018 11:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/22/18 19:12	10/22/18 19:38		MIG	KONE-1	1	B028364
2	EPA-200.8	10/29/18 09:00	11/01/18 02:49		ARD	PE-EL4	1	B028596

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Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-09	Client Sample Name: JPL, MW-21-2, 10/22/2018 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
Chloroform	0.16	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-09	Client Sample Name: JPL, MW-21-2, 10/22/2018 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	0.42	ug/L	0.50	0.23	EPA-524.2	ND	J	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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-09	Client Sample Name: JPL, MW-21-2, 10/22/2018 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)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.0	%	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	10/27/18 09:00	10/28/18 08:01	MGC	MS-V5	1	B028563

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-09	Client Sample Name: JPL, MW-21-2, 10/22/2018 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	10/27/18 09:00	10/28/18 08:01	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833239-09	Client Sample Name: JPL, MW-21-2, 10/22/2018 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.6	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/30/18 05:12	TMS	IC6	1	B028649

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833239-09	Client Sample Name: JPL, MW-21-2, 10/22/2018 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/22/18 19:12	10/22/18	19:16	MIG	KONE-1	1	B028364
2	EPA-200.8	10/29/18 09:00	11/01/18	02:52	ARD	PE-EL4	1	B028596

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Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-10	Client Sample Name: JPL, DUP-4-4Q18, 10/22/2018 12:10:00PM, 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	0.18	ug/L	0.50	0.14	EPA-524.2	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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3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-10	Client Sample Name: JPL, DUP-4-4Q18, 10/22/2018 12:10:00PM, 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	0.43	ug/L	0.50	0.23	EPA-524.2	ND	J	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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-10	Client Sample Name: JPL, DUP-4-4Q18, 10/22/2018 12:10:00PM, 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)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.2	%	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	10/27/18 09:00	10/28/18 08:24	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-10	Client Sample Name: JPL, DUP-4-4Q18, 10/22/2018 12:10:00PM, 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	10/27/18 09:00	10/28/18 08:24	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833239-10	Client Sample Name: JPL, DUP-4-4Q18, 10/22/2018 12:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.4	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/30/18 05:28	TMS	IC6	1	B028649

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Tidewater Inc.
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Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833239-10	Client Sample Name: JPL, DUP-4-4Q18, 10/22/2018 12:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/22/18 19:12	10/22/18 19:38		MIG	KONE-1	1	B028364
2	EPA-200.8	10/29/18 09:00	11/01/18 02:56		ARD	PE-EL4	1	B028596

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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-11	Client Sample Name: JPL, EB-5-102218, 10/22/2018 12:20:00PM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-11	Client Sample Name: JPL, EB-5-102218, 10/22/2018 12:20:00PM, 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
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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-11	Client Sample Name: JPL, EB-5-102218, 10/22/2018 12:20:00PM, 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)	103	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	95.5	%	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	10/27/18 09:00	10/28/18 08:47	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-11	Client Sample Name: JPL, EB-5-102218, 10/22/2018 12:20:00PM, 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	10/27/18 09:00	10/28/18 08:47	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833239-11	Client Sample Name: JPL, EB-5-102218, 10/22/2018 12:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/30/18 05:43	TMS	IC6	1	B028649

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833239-11	Client Sample Name: JPL, EB-5-102218, 10/22/2018 12:20:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/22/18 19:12	10/22/18 20:02		MIG	KONE-1	1	B028365
2	EPA-200.8	10/29/18 09:00	11/01/18 02:59		ARD	PE-EL4	1	B028596

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-12	Client Sample Name: JPL, SB-2-102218, 10/22/2018 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
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: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-12	Client Sample Name: JPL, SB-2-102218, 10/22/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833239-12	Client Sample Name: JPL, SB-2-102218, 10/22/2018 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		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)	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	10/27/18 09:00	10/28/18 09:10	MGC	MS-V5	1	B028563

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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833239-12	Client Sample Name: JPL, SB-2-102218, 10/22/2018 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	10/27/18 09:00	10/28/18 09:10	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833239-12	Client Sample Name: JPL, SB-2-102218, 10/22/2018 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/29/18 09:00	10/30/18 05:58	TMS	IC6	1	B028649

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833239-12	Client Sample Name: JPL, SB-2-102218, 10/22/2018 12:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/22/18 19:12	10/22/18 20:02		MIG	KONE-1	1	B028365
2	EPA-200.8	10/29/18 09:00	10/30/18 23:30		ARD	PE-EL4	1	B028597

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028563						
Benzene	B028563-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B028563-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B028563-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B028563-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B028563-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B028563-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B028563-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B028563-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B028563-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B028563-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B028563-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B028563-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B028563-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B028563-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B028563-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B028563-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B028563-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B028563-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B028563-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B028563-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B028563-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B028563-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B028563-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B028563-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B028563-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B028563-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B028563-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B028563-BLK1	ND	ug/L	0.50	0.14	

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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028563						
trans-1,3-Dichloropropene	B028563-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B028563-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B028563-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B028563-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B028563-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B028563-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B028563-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B028563-BLK1	ND	ug/L	0.50	0.12	
Styrene	B028563-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B028563-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B028563-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B028563-BLK1	ND	ug/L	0.50	0.23	
Toluene	B028563-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B028563-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B028563-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B028563-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B028563-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B028563-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B028563-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B028563-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B028563-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B028563-BLK1	ND	ug/L	0.50	0.18	
Acetone	B028563-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B028563-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B028563-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B028563-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B028563-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B028563-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B028563-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B028563-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B028563-BLK1	ND	ug/L	4.0	1.3	

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Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028563						
Ethyl t-butyl ether	B028563-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B028563-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B028563-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B028563-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B028563-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B028563-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B028563-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B028563-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B028563-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B028563-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B028563-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B028563-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B028563-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B028563-BLK1	99.3	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B028563-BLK1	97.3	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B028563-BLK1	104	%	80 - 120 (LCL - UCL)		

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028563										
Benzene	B028563-BS1	LCS	25.580	25.000	ug/L	102		70 - 130		
Bromodichloromethane	B028563-BS1	LCS	23.180	25.000	ug/L	92.7		70 - 130		
Chlorobenzene	B028563-BS1	LCS	24.440	25.000	ug/L	97.8		70 - 130		
Chloroethane	B028563-BS1	LCS	28.160	25.000	ug/L	113		70 - 130		
1,4-Dichlorobenzene	B028563-BS1	LCS	24.200	25.000	ug/L	96.8		70 - 130		
1,1-Dichloroethane	B028563-BS1	LCS	27.020	25.000	ug/L	108		70 - 130		
1,1-Dichloroethene	B028563-BS1	LCS	26.980	25.000	ug/L	108		70 - 130		
Toluene	B028563-BS1	LCS	24.400	25.000	ug/L	97.6		70 - 130		
Trichloroethene	B028563-BS1	LCS	26.060	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B028563-BS1	LCS	10.030	10.000	ug/L	100		75 - 125		
Toluene-d8 (Surrogate)	B028563-BS1	LCS	9.8600	10.000	ug/L	98.6		80 - 120		
4-Bromofluorobenzene (Surrogate)	B028563-BS1	LCS	10.000	10.000	ug/L	100		80 - 120		

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028563		Used client sample: Y - Description: MW-15, 10/24/2018 10:59								
Benzene	MS	1833531-11	ND	25.270	25.000	ug/L		101		70 - 130
	MSD	1833531-11	ND	25.830	25.000	ug/L	2.2	103	20	70 - 130
Bromodichloromethane	MS	1833531-11	ND	22.880	25.000	ug/L		91.5		70 - 130
	MSD	1833531-11	ND	22.820	25.000	ug/L	0.3	91.3	20	70 - 130
Chlorobenzene	MS	1833531-11	ND	24.970	25.000	ug/L		99.9		70 - 130
	MSD	1833531-11	ND	24.780	25.000	ug/L	0.8	99.1	20	70 - 130
Chloroethane	MS	1833531-11	ND	27.310	25.000	ug/L		109		70 - 130
	MSD	1833531-11	ND	27.080	25.000	ug/L	0.8	108	20	70 - 130
1,4-Dichlorobenzene	MS	1833531-11	ND	24.580	25.000	ug/L		98.3		70 - 130
	MSD	1833531-11	ND	24.610	25.000	ug/L	0.1	98.4	20	70 - 130
1,1-Dichloroethane	MS	1833531-11	ND	26.220	25.000	ug/L		105		70 - 130
	MSD	1833531-11	ND	26.560	25.000	ug/L	1.3	106	20	70 - 130
1,1-Dichloroethene	MS	1833531-11	ND	25.900	25.000	ug/L		104		70 - 130
	MSD	1833531-11	ND	26.340	25.000	ug/L	1.7	105	20	70 - 130
Toluene	MS	1833531-11	ND	24.180	25.000	ug/L		96.7		70 - 130
	MSD	1833531-11	ND	23.980	25.000	ug/L	0.8	95.9	20	70 - 130
Trichloroethene	MS	1833531-11	ND	24.160	25.000	ug/L		96.6		70 - 130
	MSD	1833531-11	ND	24.280	25.000	ug/L	0.5	97.1	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1833531-11	ND	9.7300	10.000	ug/L		97.3		75 - 125
	MSD	1833531-11	ND	9.8100	10.000	ug/L	0.8	98.1		75 - 125
Toluene-d8 (Surrogate)	MS	1833531-11	ND	9.7500	10.000	ug/L		97.5		80 - 120
	MSD	1833531-11	ND	9.6800	10.000	ug/L	0.7	96.8		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1833531-11	ND	10.210	10.000	ug/L		102		80 - 120
	MSD	1833531-11	ND	10.500	10.000	ug/L	2.8	105		80 - 120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028563						
Chloroacetonitrile	B028563-BLK1	0	ug/L			
1-Chlorobutane	B028563-BLK1	0	ug/L			
1,1-Dichloropropanone	B028563-BLK1	0	ug/L			
Methyl acrylate	B028563-BLK1	0	ug/L			
Nitrobenzene	B028563-BLK1	0	ug/L			
2-Nitropropane	B028563-BLK1	0	ug/L			

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028649						
Perchlorate	B028649-BLK1	ND	ug/L	4.0	0.92	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028649										
Perchlorate	B028649-BS1	LCS	10.507	10.000	ug/L	105		85 - 115		

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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
QC Batch ID: B028649		Used client sample: Y - Description: MW-25-3, 10/16/2018 12:15									
Perchlorate	DUP	1832621-08	9.7750	9.7128		ug/L	0.6		15		
	MS	1832621-08	9.7750	20.236	10.101	ug/L		104		80 - 120	
	MSD	1832621-08	9.7750	20.133	10.101	ug/L	0.5	103	15	80 - 120	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B028364						
Hexavalent Chromium	B028364-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028365						
Hexavalent Chromium	B028365-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028596						
Total Recoverable Chromium	B028596-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B028597						
Total Recoverable Chromium	B028597-BLK1	ND	ug/L	3.0	0.50	

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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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		
QC Batch ID: B028364											
Hexavalent Chromium	B028364-BS1	LCS	0.047853	0.050000	mg/L	95.7		85	115		
QC Batch ID: B028365											
Hexavalent Chromium	B028365-BS1	LCS	0.046808	0.050000	mg/L	93.6		85	115		
QC Batch ID: B028596											
Total Recoverable Chromium	B028596-BS1	LCS	40.924	40.000	ug/L	102		85	115		
QC Batch ID: B028597											
Total Recoverable Chromium	B028597-BS1	LCS	41.279	40.000	ug/L	103		85	115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028364		Used client sample: Y - Description: MW-18-5, 10/22/2018 07:50								
Hexavalent Chromium	DUP	1833239-02	ND	ND		mg/L			10	
	MS	1833239-02	ND	0.048747	0.052632	mg/L		92.6		85 - 115
	MSD	1833239-02	ND	0.045416	0.052632	mg/L	7.1	86.3	10	85 - 115
QC Batch ID: B028365		Used client sample: Y - Description: EB-5-102218, 10/22/2018 12:20								
Hexavalent Chromium	DUP	1833239-11	ND	ND		mg/L			10	
	MS	1833239-11	ND	0.055220	0.052632	mg/L		105		85 - 115
	MSD	1833239-11	ND	0.054724	0.052632	mg/L	0.9	104	10	85 - 115
QC Batch ID: B028596		Used client sample: Y - Description: MW-18-5, 10/22/2018 07:50								
Total Recoverable Chromium	DUP	1833239-02	ND	ND		ug/L			20	
	MS	1833239-02	ND	40.079	40.000	ug/L		100		70 - 130
	MSD	1833239-02	ND	37.438	40.000	ug/L	6.8	93.6	20	70 - 130
QC Batch ID: B028597		Used client sample: Y - Description: SB-2-102218, 10/22/2018 12:30								
Total Recoverable Chromium	DUP	1833239-12	ND	ND		ug/L			20	
	MS	1833239-12	ND	43.306	40.000	ug/L		108		70 - 130
	MSD	1833239-12	ND	41.000	40.000	ug/L	5.5	102	20	70 - 130

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/01/2018 18:39
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 11/12/2018

David Conner

Tidewater Inc.

3761 Attucks Drive
Powell, OH 43065

Client Project: 4Q18
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1833402
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/23/2018. 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 Connor

Project Description: JPL-GW Monitoring Project Code: 4Q18

Analysis Requested: VOCs EPA 524.2, Total Cr (200.8), Perchlorate (EPA 314.D), Chloride, Nitrate, Sulfate (300), Orthophosphate (365.1), Nitrite (350.2), Hexavalent Cr (7196)

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

Sample #, Sample Description, Date, Time, Matrix* table with 11 rows of data including sample IDs like TB-6-102318 and MW-23-5.

Table with columns for Sample #, Sample Description, Date, Time, Matrix*, and Analysis Requested. Includes handwritten notes like 'Level IV' and 'DISTRIBUTION'.

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

Cost Center: 1. Relinquished By, 2. Relinquished By, 3. Relinquished By. Includes dates and times for each step.

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

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.



Chain of Custody Form

Page 2 of 2

BC Laboratories, Inc.

*Required Fields 18-33402

Client: Tidewater, Inc.
 Attn: David Corner
 Street Address: 3781 Altucks Drive
 City: Powell State: OH Zip: 43065
 Phone: 626 288-5715 Fax: 614 792-2897
 Email: david.corner@tdk20.net

Project Description: JPL-GW Monitoring
 Project Code: 4Q18
 Sampler(s): Blaine Tech

Submission #: _____

Sample #	Sample Description	Date	Time	Matrix*	Analysis Requested							
					Hexavalent Cr (7196)	Nitrite (353.2)	Orthophosphate (365.1)	Chloride, Nitrate, Sulfate (300)	Perchlorate (EPA 314.0)	Total Cr (200.8)	VOCs EPA 524.2	
-12	MW-4-1	10/23/18	1315	GW	X	X	X	X	X	X	X	
-13	EB-6-102318	10/23/18	1330	GW	X	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

Global ID: _____

1. Relinquished By: _____ Date: 10/23/18 Time: 1400
 2. Relinquished By: _____ Date: 10-23-18 Time: 1700
 3. Relinquished By: _____ Date: 10-23-18 Time: 1700

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 #: 18-33402

SHIPPING INFORMATION
Fed Ex [] UPS [] Ontrac [] Hand Delivery []
BC Lab Field Service [X] Other [] (Specify) _____

SHIPPING CONTAINER
Ice Chest [X] None [] Box []
Other [] (Specify) _____

FREE LIQUID
YES [] NO []
W / S

Refrigerant: Ice [X] Blue Ice [] None [] Other [] Comments:

Custody Seals Ice Chest [] Containers []
Intact? Yes [] No [] Intact? Yes [] No []

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

COC Received
YES [X] NO []

Emissivity: 97 Container: [] Thermometer ID: 234
Temperature: (A) 0.0 °C / (C) 0.0 °C

Date/Time: 10-23-18
Analyst Init: [Signature]

Table with columns for Sample Containers and Sample Numbers (1-10). Rows include various sample types like QT PE UNPRES, INORGANIC CHEMICAL METALS, and various EPA methods. Handwritten entries include 'E', 'ABC', and 'D'.

Comments:
Sample Numbering Completed By: [Signature] Date/Time: 10-23-18 1745 Rev 21 05/23/2016
A = Actual / C = Corrected

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. COOLER RECEIPT FORM Page 2 of 2

Submission #: 18-33402

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 []
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: 97 Container: [] Thermometer ID: 274
Temperature: (A) 0.0 °C (C) 0.0 °C

Date/Time: 10-23-18
Analyst Init: []

Table with columns for Sample Containers and Sample Numbers (1-10). Rows include various sample types like QT PE UNPRES, INORGANIC CHEMICAL METALS, and various EPA vials. Handwritten entries include 'E', 'ABC', and 'A'.

Comments:
Sample Numbering Completed By: [] Date/Time: 10-23-18 1745
A = Actual / C = Corrected

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.



Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833402-01	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: TB-6-102318 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 07:00 Sample Depth: --- Lab Matrix: Water Sample Type: Trip Blank Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-6-102318 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1833402-02	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: MW-23-5 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 07:30 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-23-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1833402-03	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: MW-23-4 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 07:50 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833402-04	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: MW-23-3 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 08:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-23-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1833402-05	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: DUP-5-4Q18 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 08:25 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-5-4Q18 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1833402-06	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: MW-23-2 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 09:30 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833402-07	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: MW-23-1 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 10:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-23-1 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1833402-08	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: MW-4-5 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 11:20 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-4-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1833402-09	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: MW-4-4 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 11:45 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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1833402-10	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: MW-4-3 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 12:20 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-4-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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1833402-11	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: MW-4-2 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 12:45 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-4-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
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1833402-12	COC Number: --- Project Number: Nasa/JPL Sampling Location: --- Sampling Point: MW-4-1 Sampled By: Blaine Tech of BTSC	Receive Date: 10/23/2018 17:00 Sampling Date: 10/23/2018 13:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
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1833402-13	COC Number: ---	Receive Date: 10/23/2018 17:00
	Project Number: Nasa/JPL	Sampling Date: 10/23/2018 13:30
	Sampling Location: ---	Sample Depth: ---
	Sampling Point: EB-6-102318	Lab Matrix: Water
	Sampled By: Blaine Tech of BTSC	Sample Type: Groundwater
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): EB-6-102318
		Matrix: WG
		Sample QC Type (SACode): CS
		Cooler ID:

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-01	Client Sample Name: Nasa/JPL, TB-6-102318, 10/23/2018 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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-01 **Client Sample Name:** Nasa/JPL, TB-6-102318, 10/23/2018 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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-01 Client Sample Name: Nasa/JPL, TB-6-102318, 10/23/2018 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)	102	%	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	10/27/18 09:00	10/28/18 09:33	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-01	Client Sample Name: Nasa/JPL, TB-6-102318, 10/23/2018 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	10/27/18 09:00	10/28/18 09:33	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-02 **Client Sample Name:** Nasa/JPL, MW-23-5, 10/23/2018 7:30:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-02 Client Sample Name: Nasa/JPL, MW-23-5, 10/23/2018 7:30:00AM, 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	0.30	ug/L	0.50	0.12	EPA-524.2	ND	J	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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-02 **Client Sample Name:** Nasa/JPL, MW-23-5, 10/23/2018 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)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.4	%	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	10/27/18 09:00	10/28/18 09:56	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-02	Client Sample Name: Nasa/JPL, MW-23-5, 10/23/2018 7:30:00AM, 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	10/27/18 09:00	10/28/18 09:56	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-02	Client Sample Name: Nasa/JPL, MW-23-5, 10/23/2018 7:30:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	10/31/18 22:58	MIG	IC6	1	B028881

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Tidewater Inc.
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Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-02	Client Sample Name: Nasa/JPL, MW-23-5, 10/23/2018 7:30:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/23/18 17:20	10/24/18 00:10		MIG	KONE-1	1	B028433
2	EPA-200.8	10/30/18 08:55	10/31/18 02:23		ARD	PE-EL4	1	B028707

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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-03	Client Sample Name: Nasa/JPL, MW-23-4, 10/23/2018 7:50:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-03	Client Sample Name: Nasa/JPL, MW-23-4, 10/23/2018 7:50:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-03	Client Sample Name: Nasa/JPL, MW-23-4, 10/23/2018 7:50:00AM, 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)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.0	%	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	10/27/18 09:00	10/28/18 10:19	MGC	MS-V5	1	B028563

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-03	Client Sample Name: Nasa/JPL, MW-23-4, 10/23/2018 7:50:00AM, 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	10/27/18 09:00	10/28/18 10:19	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-03	Client Sample Name: Nasa/JPL, MW-23-4, 10/23/2018 7:50:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.4	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	10/31/18 23:59	MIG	IC6	1	B028881

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-03	Client Sample Name: Nasa/JPL, MW-23-4, 10/23/2018 7:50:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0039	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	4.3	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-7196	10/23/18 17:20	10/24/18 00:33		MIG	KONE-1	1	B028433
2	EPA-200.8	10/30/18 08:55	10/31/18 02:51		ARD	PE-EL4	1	B028707

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-04	Client Sample Name: Nasa/JPL, MW-23-3, 10/23/2018 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		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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1833402-04) and Client Sample Name (Nasa/JPL, MW-23-3, 10/23/2018 8:15:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-04	Client Sample Name: Nasa/JPL, MW-23-3, 10/23/2018 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		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)	97.6	%	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	10/27/18 09:00	10/28/18 10:42	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-04	Client Sample Name: Nasa/JPL, MW-23-3, 10/23/2018 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	10/27/18 09:00	10/28/18 10:42	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-04	Client Sample Name: Nasa/JPL, MW-23-3, 10/23/2018 8:15:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.9	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	11/01/18 00:15	MIG	IC6	1	B028881

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-04	Client Sample Name: Nasa/JPL, MW-23-3, 10/23/2018 8:15:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0037	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	3.0	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-7196	10/23/18 17:20	10/24/18 00:33		MIG	KONE-1	1	B028433
2	EPA-200.8	10/30/18 08:55	10/31/18 02:54		ARD	PE-EL4	1	B028707

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-05	Client Sample Name: Nasa/JPL, DUP-5-4Q18, 10/23/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-05	Client Sample Name: Nasa/JPL, DUP-5-4Q18, 10/23/2018 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
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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-05	Client Sample Name: Nasa/JPL, DUP-5-4Q18, 10/23/2018 8:25:00AM, 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)	97.1	%	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	10/27/18 09:00	10/28/18 11:05	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-05	Client Sample Name: Nasa/JPL, DUP-5-4Q18, 10/23/2018 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	10/27/18 09:00	10/28/18 11:05	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-05	Client Sample Name: Nasa/JPL, DUP-5-4Q18, 10/23/2018 8:25:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.0	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	11/01/18 01:01	SAV	IC6	1	B028881

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-05	Client Sample Name: Nasa/JPL, DUP-5-4Q18, 10/23/2018 8:25:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0036	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	3.1	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-7196	10/23/18 17:20	10/24/18 00:33	MIG	KONE-1	1	B028433
2	EPA-200.8	10/30/18 08:55	10/31/18 02:58	ARD	PE-EL4	1	B028707

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-06	Client Sample Name: Nasa/JPL, MW-23-2, 10/23/2018 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		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	0.39	ug/L	0.50	0.14	EPA-524.2	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	0.15	ug/L	0.50	0.15	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-06	Client Sample Name: Nasa/JPL, MW-23-2, 10/23/2018 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
Tetrachloroethene	0.25	ug/L	0.50	0.23	EPA-524.2	ND	J	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	1.0	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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-06 **Client Sample Name:** Nasa/JPL, MW-23-2, 10/23/2018 9:30:00AM, 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)	105	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.0	%	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	10/27/18 09:00	10/28/18 11:28	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-06	Client Sample Name: Nasa/JPL, MW-23-2, 10/23/2018 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	10/27/18 09:00	10/28/18 11:28	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-06	Client Sample Name: Nasa/JPL, MW-23-2, 10/23/2018 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	4.9	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	11/01/18 01:16	SAV	IC6	1	B028881

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-06	Client Sample Name: Nasa/JPL, MW-23-2, 10/23/2018 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0017	mg/L	0.0020	0.00070	EPA-7196	ND	J	1
Total Recoverable Chromium	0.87	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-7196	10/23/18 17:20	10/24/18 00:33	MIG	KONE-1	1	B028433
2	EPA-200.8	10/30/18 08:55	10/31/18 03:01	ARD	PE-EL4	1	B028707

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Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-07	Client Sample Name: Nasa/JPL, MW-23-1, 10/23/2018 10:00:00AM, 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	0.45	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-07 Client Sample Name: Nasa/JPL, MW-23-1, 10/23/2018 10:00:00AM, 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	1.2	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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-07	Client Sample Name: Nasa/JPL, MW-23-1, 10/23/2018 10:00:00AM, 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)	104	%	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	10/27/18 09:00	10/28/18 11:51	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-07	Client Sample Name: Nasa/JPL, MW-23-1, 10/23/2018 10:00:00AM, 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	10/27/18 09:00	10/28/18 11:51	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-07	Client Sample Name: Nasa/JPL, MW-23-1, 10/23/2018 10:00:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	4.0	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	11/01/18 01:31	SAV	IC6	1	B028881

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-07	Client Sample Name: Nasa/JPL, MW-23-1, 10/23/2018 10:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0016	mg/L	0.0020	0.00070	EPA-7196	ND	J	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-7196	10/23/18 17:20	10/24/18 00:46		MIG	KONE-1	1	B028433
2	EPA-200.8	10/30/18 08:55	10/31/18 03:05		ARD	PE-EL4	1	B028707

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Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-08	Client Sample Name: Nasa/JPL, MW-4-5, 10/23/2018 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		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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-08	Client Sample Name: Nasa/JPL, MW-4-5, 10/23/2018 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	0.17	ug/L	0.50	0.15	EPA-524.2	ND	J	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	0.16	ug/L	0.50	0.12	EPA-524.2	ND	J	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	0.70	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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-08	Client Sample Name: Nasa/JPL, MW-4-5, 10/23/2018 11:20:00AM, 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)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.8	%	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	10/27/18 12:00	10/28/18 12:14	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-08	Client Sample Name: Nasa/JPL, MW-4-5, 10/23/2018 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	10/27/18 12:00	10/28/18 12:14	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-08	Client Sample Name: Nasa/JPL, MW-4-5, 10/23/2018 11:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	11/01/18 01:47	SAV	IC6	1	B028881

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-08	Client Sample Name: Nasa/JPL, MW-4-5, 10/23/2018 11:20:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	5.6	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-7196	10/23/18 17:20	10/24/18 00:46		MIG	KONE-1	1	B028433
2	EPA-200.8	10/30/18 08:55	10/31/18 03:08		ARD	PE-EL4	1	B028707

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Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-09	Client Sample Name: Nasa/JPL, MW-4-4, 10/23/2018 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		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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-09 Client Sample Name: Nasa/JPL, MW-4-4, 10/23/2018 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	0.66	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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-09	Client Sample Name: Nasa/JPL, MW-4-4, 10/23/2018 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		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)	98.5	%	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	10/27/18 12:00	10/28/18 12:37	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-09	Client Sample Name: Nasa/JPL, MW-4-4, 10/23/2018 11:45:00AM, 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	10/27/18 12:00	10/28/18 12:37	MGC	MS-V5	1	B028564

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-09	Client Sample Name: Nasa/JPL, MW-4-4, 10/23/2018 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	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	11/01/18 02:02	SAV	IC6	1	B028881

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-09	Client Sample Name: Nasa/JPL, MW-4-4, 10/23/2018 11:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00090	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/23/18 17:20	10/24/18 00:46		MIG	KONE-1	1	B028433
2	EPA-200.8	10/30/18 08:55	10/31/18 03:12		ARD	PE-EL4	1	B028707

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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-10	Client Sample Name: Nasa/JPL, MW-4-3, 10/23/2018 12:20:00PM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-10 Client Sample Name: Nasa/JPL, MW-4-3, 10/23/2018 12:20:00PM, 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
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	0.53	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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-10	Client Sample Name: Nasa/JPL, MW-4-3, 10/23/2018 12:20:00PM, 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)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	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	10/27/18 12:00	10/28/18 15:19	MGC	MS-V5	1	B028564

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3761 Attucks Drive
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Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-10	Client Sample Name: Nasa/JPL, MW-4-3, 10/23/2018 12:20:00PM, 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	10/27/18 12:00	10/28/18 15:19	MGC	MS-V5	1	B028564

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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-10	Client Sample Name: Nasa/JPL, MW-4-3, 10/23/2018 12:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	11/01/18 02:17	SAV	IC6	1	B028881

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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-10	Client Sample Name: Nasa/JPL, MW-4-3, 10/23/2018 12:20:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/23/18 17:20	10/24/18 00:46		MIG	KONE-1	1	B028433
2	EPA-200.8	10/30/18 08:55	10/31/18 03:15		ARD	PE-EL4	1	B028707

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Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-11	Client Sample Name: Nasa/JPL, MW-4-2, 10/23/2018 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		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	0.37	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-11	Client Sample Name: Nasa/JPL, MW-4-2, 10/23/2018 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	0.25	ug/L	0.50	0.23	EPA-524.2	ND	J	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	1.0	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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-11	Client Sample Name: Nasa/JPL, MW-4-2, 10/23/2018 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)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.8	%	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	10/27/18 12:00	10/28/18 15:42	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-11	Client Sample Name: Nasa/JPL, MW-4-2, 10/23/2018 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	10/27/18 12:00	10/28/18 15:42	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-11	Client Sample Name: Nasa/JPL, MW-4-2, 10/23/2018 12:45:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	9.9	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	11/01/18 02:33	SAV	IC6	1	B028881

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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-11	Client Sample Name: Nasa/JPL, MW-4-2, 10/23/2018 12:45:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/23/18 17:20	10/23/18 23:13	MIG	KONE-1	1	B028434
2	EPA-200.8	10/30/18 08:55	10/31/18 03:18	ARD	PE-EL4	1	B028707

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1833402-12) and Client Sample Name (Nasa/JPL, MW-4-1, 10/23/2018 1:15:00PM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-12	Client Sample Name: Nasa/JPL, MW-4-1, 10/23/2018 1:15:00PM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-12	Client Sample Name: Nasa/JPL, MW-4-1, 10/23/2018 1:15:00PM, 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		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	10/27/18 12:00	10/28/18 16:05	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-12	Client Sample Name: Nasa/JPL, MW-4-1, 10/23/2018 1:15:00PM, 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	10/27/18 12:00	10/28/18 16:05	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-12	Client Sample Name: Nasa/JPL, MW-4-1, 10/23/2018 1:15:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	11/01/18 02:48	SAV	IC6	1	B028881

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-12	Client Sample Name: Nasa/JPL, MW-4-1, 10/23/2018 1:15:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00072	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/23/18 17:20	10/23/18 23:13		MIG	KONE-1	1	B028434
2	EPA-200.8	10/30/18 08:55	11/01/18 13:30		ARD	PE-EL4	1	B028708

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-13 Client Sample Name: Nasa/JPL, EB-6-102318, 10/23/2018 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		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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-13	Client Sample Name: Nasa/JPL, EB-6-102318, 10/23/2018 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
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: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833402-13	Client Sample Name: Nasa/JPL, EB-6-102318, 10/23/2018 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)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.5	%	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	10/27/18 12:00	10/28/18 16:29	MGC	MS-V5	1	B028564

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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833402-13	Client Sample Name: Nasa/JPL, EB-6-102318, 10/23/2018 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	10/27/18 12:00	10/28/18 16:29	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833402-13	Client Sample Name: Nasa/JPL, EB-6-102318, 10/23/2018 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	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	10/31/18 20:00	11/01/18 03:03	SAV	IC6	1	B028881

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833402-13	Client Sample Name: Nasa/JPL, EB-6-102318, 10/23/2018 1:30:00PM, Blaine Tech							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.0	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-7196	10/23/18 17:20	10/23/18 23:13	MIG	KONE-1	1	B028434
2	EPA-200.8	10/30/18 08:55	11/01/18 13:34	ARD	PE-EL4	1	B028708

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028563						
Benzene	B028563-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B028563-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B028563-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B028563-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B028563-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B028563-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B028563-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B028563-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B028563-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B028563-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B028563-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B028563-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B028563-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B028563-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B028563-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B028563-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B028563-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B028563-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B028563-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B028563-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B028563-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B028563-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B028563-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B028563-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B028563-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B028563-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B028563-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B028563-BLK1	ND	ug/L	0.50	0.14	

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Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028563						
trans-1,3-Dichloropropene	B028563-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B028563-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B028563-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B028563-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B028563-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B028563-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B028563-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B028563-BLK1	ND	ug/L	0.50	0.12	
Styrene	B028563-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B028563-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B028563-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B028563-BLK1	ND	ug/L	0.50	0.23	
Toluene	B028563-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B028563-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B028563-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B028563-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B028563-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B028563-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B028563-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B028563-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B028563-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B028563-BLK1	ND	ug/L	0.50	0.18	
Acetone	B028563-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B028563-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B028563-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B028563-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B028563-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B028563-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B028563-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B028563-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B028563-BLK1	ND	ug/L	4.0	1.3	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B028563

Ethyl t-butyl ether	B028563-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B028563-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B028563-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B028563-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B028563-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B028563-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B028563-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B028563-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B028563-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B028563-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B028563-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B028563-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B028563-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B028563-BLK1	99.3	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B028563-BLK1	97.3	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B028563-BLK1	104	%	80 - 120 (LCL - UCL)		

QC Batch ID: B028564

Benzene	B028564-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B028564-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B028564-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B028564-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B028564-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B028564-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B028564-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B028564-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B028564-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B028564-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B028564-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B028564-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B028564-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B028564-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B028564-BLK1	ND	ug/L	0.50	0.093	

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Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028564						
Dibromochloromethane	B028564-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B028564-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B028564-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B028564-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B028564-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B028564-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B028564-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B028564-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B028564-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B028564-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B028564-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B028564-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B028564-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B028564-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B028564-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B028564-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B028564-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B028564-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B028564-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B028564-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B028564-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B028564-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B028564-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B028564-BLK1	ND	ug/L	0.50	0.12	
Styrene	B028564-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B028564-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B028564-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B028564-BLK1	ND	ug/L	0.50	0.23	
Toluene	B028564-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.15	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Table with 7 columns: Constituent, QC Sample ID, MB Result, Units, PQL, MDL, Lab Quals. Includes a QC Batch ID: B028564 and a list of 30 chemical constituents with their respective results and limits.

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028563										
Benzene	B028563-BS1	LCS	25.580	25.000	ug/L	102		70 - 130		
Bromodichloromethane	B028563-BS1	LCS	23.180	25.000	ug/L	92.7		70 - 130		
Chlorobenzene	B028563-BS1	LCS	24.440	25.000	ug/L	97.8		70 - 130		
Chloroethane	B028563-BS1	LCS	28.160	25.000	ug/L	113		70 - 130		
1,4-Dichlorobenzene	B028563-BS1	LCS	24.200	25.000	ug/L	96.8		70 - 130		
1,1-Dichloroethane	B028563-BS1	LCS	27.020	25.000	ug/L	108		70 - 130		
1,1-Dichloroethene	B028563-BS1	LCS	26.980	25.000	ug/L	108		70 - 130		
Toluene	B028563-BS1	LCS	24.400	25.000	ug/L	97.6		70 - 130		
Trichloroethene	B028563-BS1	LCS	26.060	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B028563-BS1	LCS	10.030	10.000	ug/L	100		75 - 125		
Toluene-d8 (Surrogate)	B028563-BS1	LCS	9.8600	10.000	ug/L	98.6		80 - 120		
4-Bromofluorobenzene (Surrogate)	B028563-BS1	LCS	10.000	10.000	ug/L	100		80 - 120		

QC Batch ID: B028564										
Benzene	B028564-BS1	LCS	25.470	25.000	ug/L	102		70 - 130		
Bromodichloromethane	B028564-BS1	LCS	22.730	25.000	ug/L	90.9		70 - 130		
Chlorobenzene	B028564-BS1	LCS	23.560	25.000	ug/L	94.2		70 - 130		
Chloroethane	B028564-BS1	LCS	26.960	25.000	ug/L	108		70 - 130		
1,4-Dichlorobenzene	B028564-BS1	LCS	22.950	25.000	ug/L	91.8		70 - 130		
1,1-Dichloroethane	B028564-BS1	LCS	26.550	25.000	ug/L	106		70 - 130		
1,1-Dichloroethene	B028564-BS1	LCS	25.500	25.000	ug/L	102		70 - 130		
Toluene	B028564-BS1	LCS	24.020	25.000	ug/L	96.1		70 - 130		
Trichloroethene	B028564-BS1	LCS	25.380	25.000	ug/L	102		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B028564-BS1	LCS	9.9000	10.000	ug/L	99.0		75 - 125		
Toluene-d8 (Surrogate)	B028564-BS1	LCS	9.8600	10.000	ug/L	98.6		80 - 120		
4-Bromofluorobenzene (Surrogate)	B028564-BS1	LCS	10.110	10.000	ug/L	101		80 - 120		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B028563 and Used client sample: Y - Description: MW-15, 10/24/2018 10:59.

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: B028564 and Used client sample: Y - Description: MW-1, 10/24/2018 12:20.

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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 Quals
								Percent Recovery	Percent Recovery	
QC Batch ID: B028564		Used client sample: Y - Description: MW-1, 10/24/2018 12:20								
1,1-Dichloroethene	MS	1833531-12	ND	25.890	25.000	ug/L		104		70 - 130
	MSD	1833531-12	ND	25.670	25.000	ug/L	0.9	103	20	70 - 130
Toluene	MS	1833531-12	ND	25.230	25.000	ug/L		101		70 - 130
	MSD	1833531-12	ND	24.340	25.000	ug/L	3.6	97.4	20	70 - 130
Trichloroethene	MS	1833531-12	ND	25.670	25.000	ug/L		103		70 - 130
	MSD	1833531-12	ND	24.340	25.000	ug/L	5.3	97.4	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1833531-12	ND	10.010	10.000	ug/L		100		75 - 125
	MSD	1833531-12	ND	9.5000	10.000	ug/L	5.2	95.0		75 - 125
Toluene-d8 (Surrogate)	MS	1833531-12	ND	9.6800	10.000	ug/L		96.8		80 - 120
	MSD	1833531-12	ND	9.6300	10.000	ug/L	0.5	96.3		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1833531-12	ND	9.9500	10.000	ug/L		99.5		80 - 120
	MSD	1833531-12	ND	10.360	10.000	ug/L	4.0	104		80 - 120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
-------------	--------------	-----------	-------	-----	-----	-----------

QC Batch ID: B028563

Chloroacetonitrile	B028563-BLK1	0	ug/L			
1-Chlorobutane	B028563-BLK1	0	ug/L			
1,1-Dichloropropanone	B028563-BLK1	0	ug/L			
Methyl acrylate	B028563-BLK1	0	ug/L			
Nitrobenzene	B028563-BLK1	0	ug/L			
2-Nitropropane	B028563-BLK1	0	ug/L			

QC Batch ID: B028564

Chloroacetonitrile	B028564-BLK1	0	ug/L			
1-Chlorobutane	B028564-BLK1	0	ug/L			
1,1-Dichloropropanone	B028564-BLK1	0	ug/L			
Methyl acrylate	B028564-BLK1	0	ug/L			
Nitrobenzene	B028564-BLK1	0	ug/L			
2-Nitropropane	B028564-BLK1	0	ug/L			

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028881						
Perchlorate	B028881-BLK1	ND	ug/L	4.0	0.92	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028881										
Perchlorate	B028881-BS1	LCS	11.490	10.000	ug/L	115		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028881		Used client sample: Y - Description: MW-23-5, 10/23/2018 07:30								
Perchlorate	DUP	1833402-02	ND	ND		ug/L			15	
	MS	1833402-02	ND	11.165	10.101	ug/L		111		80 - 120
	MSD	1833402-02	ND	11.447	10.101	ug/L	2.5	113	15	80 - 120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B028433						
Hexavalent Chromium	B028433-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028434						
Hexavalent Chromium	B028434-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028707						
Total Recoverable Chromium	B028707-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B028708						
Total Recoverable Chromium	B028708-BLK1	ND	ug/L	3.0	0.50	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028433										
Hexavalent Chromium	B028433-BS1	LCS	0.054734	0.050000	mg/L	109		85 - 115		
QC Batch ID: B028434										
Hexavalent Chromium	B028434-BS1	LCS	0.053873	0.050000	mg/L	108		85 - 115		
QC Batch ID: B028707										
Total Recoverable Chromium	B028707-BS1	LCS	40.327	40.000	ug/L	101		85 - 115		
QC Batch ID: B028708										
Total Recoverable Chromium	B028708-BS1	LCS	42.462	40.000	ug/L	106		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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		
QC Batch ID: B028433		Used client sample: Y - Description: MW-23-5, 10/23/2018 07:30									
Hexavalent Chromium	DUP	1833402-02	ND	ND		mg/L			10		
	MS	1833402-02	ND	0.054505	0.052632	mg/L		104		85 - 115	
	MSD	1833402-02	ND	0.053448	0.052632	mg/L	2.0	102	10	85 - 115	
QC Batch ID: B028434		Used client sample: Y - Description: MW-4-2, 10/23/2018 12:45									
Hexavalent Chromium	DUP	1833402-11	ND	ND		mg/L			10		
	MS	1833402-11	ND	0.054588	0.052632	mg/L		104		85 - 115	
	MSD	1833402-11	ND	0.053476	0.052632	mg/L	2.1	102	10	85 - 115	
QC Batch ID: B028707		Used client sample: Y - Description: MW-23-5, 10/23/2018 07:30									
Total Recoverable Chromium	DUP	1833402-02	ND	1.2690		ug/L				20	J
	MS	1833402-02	ND	41.020	40.000	ug/L		103			70 - 130
	MSD	1833402-02	ND	40.201	40.000	ug/L	2.0	101	20		70 - 130
QC Batch ID: B028708		Used client sample: Y - Description: MW-9, 10/24/2018 13:30									
Total Recoverable Chromium	DUP	1833531-13	125.17	121.35		ug/L	3.1			20	
	MS	1833531-13	125.17	162.44	40.000	ug/L		93.2			70 - 130
	MSD	1833531-13	125.17	162.02	40.000	ug/L	0.3	92.1	20		70 - 130

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/12/2018 9:03
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 11/09/2018

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 4Q18
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1833531
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/24/2018. 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 Corner
 Address: 3761 Altucks Drive
 City: Powell State: OH Zip: 43065
 Phone: 626 1258 - 5715 Fax: 614 792 - 2897
 Email Address: david.corner@ltdh2o.net
 Submission #: 18-33531

Project Description: JPL-GW Monitoring
 Project Code: 4Q18
 Sampler(s): Blaine Tech

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*
-1	TB-7-102418	10/24/18	0700	GW
-2	MW-11-5		0800	GW
-3	MW-11-4		0845	GW
-4	MW-11-3		0920	GW
-5	MW-11-2		0950	GW
-6	MW-11-1		1030	GW
-7	MW-26-2		1200	GW
-8	DUP-6-4018		1210	GW
-9	MW-26-1		1250	GW
-10	EB-7-102418		1220	GW

Analysis Requested

Analysis	Requested
VOCs EPA 524.2	<input checked="" type="checkbox"/>
Total Cr (200.8)	<input checked="" type="checkbox"/>
Perchlorate (EPA 314.0)	<input checked="" type="checkbox"/>
Chloride, Nitrate, Sulfate (300)	<input checked="" type="checkbox"/>
Orthophosphate (365.1)	<input checked="" type="checkbox"/>
Nitrite (353.2)	<input checked="" type="checkbox"/>
Hexavalent Cr (7196)	<input checked="" type="checkbox"/>

Notes

CHK BY: DISTRIBUTION
 [Signature]
 SUB-OUT

CHRGT HOLDING TIME
 (C-H) NO. (NO.) OP. SS
 DO CH. BOB MBAS GGT

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: _____

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. Requisitioned By: [Signature] Date: 10/24/18 Time: 1445
 2. Requisitioned By: [Signature] Date: 10/24/18 Time: 1715
 3. Requisitioned By: [Signature] Date: 10/24/18 Time: 1715

Global ID:

1. Received By: [Signature] Date: 10/24/18 Time: [Blank]
 2. Received By: [Signature] Date: 10/24/18 Time: [Blank]
 3. Received By: [Signature] Date: 10/24/18 Time: [Blank]

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: **David Conner**
 Attn: **David Conner**
 Street Address: **3761 Allucks Drive**
 City: **Powell** State: **OH** Zip: **43065**
 Phone: **626 1288 - 5715** Fax: **614 792 - 2887**
 Email Address: **david.conner@tidetw.net**
 Submission #: **18-33531**

Project Description: **JPL-GW Monitoring**
 Project Code: **4018**
 Sampler (s): **Blaine Tech**

Matrix: Wastewater Groundwater Liquid Miscellaneous Other

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

Lab TAT Approval: _____

Global ID: _____

1. Relinquished By: _____ Date: **10/27/15** Time: **1445**
 2. Relinquished By: _____ Date: **10/27/15** Time: **1715**
 3. Relinquished By: _____ Date: **10-24-16** Time: **1715**

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	Total Cr (200.8)	Perchlorate (EPA 314.0)	Chloride, Nitrate, Sulfate (300)	Orthophosphate (365.1)	Nitrite (353.2)	Hexavalent Cr (719)	Notes
15	MW-15 -11	10-24-15	1059	GW	X	X	X	X			X	MS/MSD
12	MW-12 -12	10-24-15	1220	GW	X	X	X	X			X	MS/MSD
13	MW-13 -13	10-24-15	1330	GW	X	X	X	X			X	MS/MSD

Are there any tests with holding times? Yes No
 *Standard Turnaround = 10

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

Cost Center: _____
 1. Relinquished By: _____ Date: _____ Time: _____
 2. Relinquished By: _____ Date: _____ Time: _____
 3. Relinquished By: _____ Date: _____ Time: _____

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)

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 3

Submission #: 1833531

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: [Seal 1] [Seal 2] 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: 10/24 1715

Temperature: (A) 2.4 °C / (C) 2.1 °C Analyst Init: ENL

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 / 3oz / 16oz PE UNPRES						E				
2oz Cr ⁴⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 3oz / 16oz		G	C	G	E	F	E	E	E	G
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	ABC	ABC	ABC	ABC
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/504/508/509										
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: ENL Date/Time: 10/24/15 Rev 21 05/23/2015

A = Actual / C = Corrected



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 3

Submission #: 1833531

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

SHIPPING CONTAINER
Ice Chest [x] None [] Box []
Other [] (Specify)

FREE LIQUID
YES [] NO []
(W) / S

Refrigerant: Ice [x] Blue Ice [] None [] Other [] Comments:

Custody Seals [] None [x] Comments:

All samples received? Yes [x] No [] All samples containers intact? Yes [x] No [] Description(s) match CGG? Yes [x] No []

COC Received
YES [x] NO []

Emissivity: 0.98 Container: Voa Thermometer ID: 208

Date/Time 10/24 1715

Temperature: (A) 2.4 °C / (C) 2.1 °C

Analyst Init EMC

Table with columns for Sample Containers and Sample Numbers (1-10). Rows include various sample types like QT PE UNPRES, INORGANIC CHEMICAL METALS, etc. Handwritten 'A2P' is visible in the table.

Comments:

Sample Numbering Completed By: [Signature]

A = Actual / C = Corrected

Date/Time: 10/24 1815

Riv 21 05/23/2016



BC LABORATORIES INC. COOLER RECEIPT FORM Page 5 of 5

Submission #: 18-33531

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: 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: PE. Thermometer ID: 208. Date/Time: 10/24/17. Analyst Init: EMC. Temperature: (A) 0.7 C / (C) 0.4 C

Table with columns for SAMPLE CONTAINERS and SAMPLE NUMBERS (1-10). Rows include various sample types like QT PE UNPRES, INORGANIC CHEMICAL METALS, etc. Handwritten 'GH' and 'JJ' are present in columns 1, 2, and 3.

Comments: Sample Numbering Completed By: Date/Time: 10/24/17. Rev 21 05/23/2015



Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833531-01	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: TB-7-102418 Sampled By: Blaine Tech of BTST	Receive Date: 10/24/2018 17:15 Sampling Date: 10/24/2018 07:00 Sample Depth: --- Lab Matrix: Water Sample Type: Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-7-102418 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1833531-02	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-11-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/24/2018 17:15 Sampling Date: 10/24/2018 08:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-11-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1833531-03	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-11-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/24/2018 17:15 Sampling Date: 10/24/2018 08:45 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-11-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833531-04	COC Number: ---	Receive Date: 10/24/2018 17:15
	Project Number: JPL	Sampling Date: 10/24/2018 09:20
	Sampling Location: ---	Sample Depth: ---
	Sampling Point: MW-11-3	Lab Matrix: Water
	Sampled By: Blaine Tech of BTST	Sample Type: Groundwater
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): MW-11-3
		Matrix: W
		Sample QC Type (SACode): CS
		Cooler ID:

1833531-05	COC Number: ---	Receive Date: 10/24/2018 17:15
	Project Number: JPL	Sampling Date: 10/24/2018 09:50
	Sampling Location: ---	Sample Depth: ---
	Sampling Point: MW-11-2	Lab Matrix: Water
	Sampled By: Blaine Tech of BTST	Sample Type: Groundwater
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): MW-11-2
		Matrix: W
		Sample QC Type (SACode): CS
		Cooler ID:

1833531-06	COC Number: ---	Receive Date: 10/24/2018 17:15
	Project Number: JPL	Sampling Date: 10/24/2018 10:30
	Sampling Location: ---	Sample Depth: ---
	Sampling Point: MW-11-1	Lab Matrix: Water
	Sampled By: Blaine Tech of BTST	Sample Type: Groundwater
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): MW-11-1
		Matrix: W
		Sample QC Type (SACode): CS
		Cooler ID:

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833531-07	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-26-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/24/2018 17:15 Sampling Date: 10/24/2018 12:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-26-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1833531-08	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: DUP-6-4Q18 Sampled By: Blaine Tech of BTST	Receive Date: 10/24/2018 17:15 Sampling Date: 10/24/2018 12:10 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-6-4Q18 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1833531-09	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-26-1 Sampled By: Blaine Tech of BTST	Receive Date: 10/24/2018 17:15 Sampling Date: 10/24/2018 12:50 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-26-1 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833531-10	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: EB-7-102418 Sampled By: Blaine Tech of BTST	Receive Date: 10/24/2018 17:15 Sampling Date: 10/24/2018 12:20 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-7-102418 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1833531-11	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-15 Sampled By: Blaine Tech of BTST	Receive Date: 10/24/2018 17:15 Sampling Date: 10/24/2018 10:59 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-15 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	---	--

1833531-12	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-1 Sampled By: Blaine Tech of BTST	Receive Date: 10/24/2018 17:15 Sampling Date: 10/24/2018 12:20 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-1 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833531-13	COC Number: ---	Receive Date: 10/24/2018 17:15
	Project Number: JPL	Sampling Date: 10/24/2018 13:30
	Sampling Location: ---	Sample Depth: ---
	Sampling Point: MW-9	Lab Matrix: Water
	Sampled By: Blaine Tech of BTST	Sample Type: Groundwater
		Delivery Work Order:
		Global ID: 0000000000
		Location ID (FieldPoint): MW-9
		Matrix: W
		Sample QC Type (SACode): CS
		Cooler ID:

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-01	Client Sample Name: JPL, TB-7-102418, 10/24/2018 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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Table with 2 columns: BCL Sample ID (1833531-01) and Client Sample Name (JPL, TB-7-102418, 10/24/2018 7:00:00AM, 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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-01	Client Sample Name: JPL, TB-7-102418, 10/24/2018 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)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.6	%	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	10/27/18 12:00	10/28/18 16:52	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-01	Client Sample Name: JPL, TB-7-102418, 10/24/2018 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	10/27/18 12:00	10/28/18 16:52	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-02	Client Sample Name: JPL, MW-11-5, 10/24/2018 8:00:00AM, 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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-02	Client Sample Name: JPL, MW-11-5, 10/24/2018 8:00:00AM, 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	0.12	ug/L	0.50	0.12	EPA-524.2	ND	J	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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-02	Client Sample Name: JPL, MW-11-5, 10/24/2018 8:00:00AM, 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)	105	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.0	%	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	10/27/18 12:00	10/28/18 17:15	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-02	Client Sample Name: JPL, MW-11-5, 10/24/2018 8:00:00AM, 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	10/27/18 12:00	10/28/18 17:15	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-02	Client Sample Name: JPL, MW-11-5, 10/24/2018 8:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/02/18 21:00	11/03/18 03:39	SAV	IC6	1	B029120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-02	Client Sample Name: JPL, MW-11-5, 10/24/2018 8:00:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.3	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/24/18 20:15	10/24/18 20:15	MIG	KONE-1	1	B028485
2	EPA-200.8	10/30/18 09:00	10/31/18 05:18	ARD	PE-EL4	1	B028709

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-03	Client Sample Name: JPL, MW-11-4, 10/24/2018 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		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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-03	Client Sample Name: JPL, MW-11-4, 10/24/2018 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	0.12	ug/L	0.50	0.12	EPA-524.2	ND	J	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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-03	Client Sample Name: JPL, MW-11-4, 10/24/2018 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		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)	97.9	%	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	10/27/18 12:00	10/28/18 17:38	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-03	Client Sample Name: JPL, MW-11-4, 10/24/2018 8:45:00AM, 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	10/27/18 12:00	10/28/18 17:38	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-03	Client Sample Name: JPL, MW-11-4, 10/24/2018 8:45:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/02/18 21:00	11/03/18 03:54	SAV	IC6	1	B029120

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-03	Client Sample Name: JPL, MW-11-4, 10/24/2018 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	0.0020	0.00070	EPA-7196	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-7196	10/24/18 20:15	10/24/18 20:16		MIG	KONE-1	1	B028485
2	EPA-200.8	10/30/18 09:00	10/31/18 05:22		ARD	PE-EL4	1	B028709

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-04	Client Sample Name: JPL, MW-11-3, 10/24/2018 9:20:00AM, 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		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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-04	Client Sample Name: JPL, MW-11-3, 10/24/2018 9:20:00AM, 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	0.38	ug/L	0.50	0.14	EPA-524.2	ND	J	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	0.40	ug/L	0.50	0.12	EPA-524.2	ND	J	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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-04	Client Sample Name: JPL, MW-11-3, 10/24/2018 9:20:00AM, 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		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)	98.0	%	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	10/27/18 12:00	10/28/18 18:01	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-04	Client Sample Name: JPL, MW-11-3, 10/24/2018 9:20:00AM, 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	10/27/18 12:00	10/28/18 18:01	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-04	Client Sample Name: JPL, MW-11-3, 10/24/2018 9:20:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/02/18 21:00	11/03/18 04:10	SAV	IC6	1	B029120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-04	Client Sample Name: JPL, MW-11-3, 10/24/2018 9:20:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	0.83	ug/L	3.0	0.50	EPA-200.8	ND	J	2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/24/18 20:15	10/24/18 20:15	MIG	KONE-1	1	B028485
2	EPA-200.8	10/30/18 09:00	10/31/18 05:25	ARD	PE-EL4	1	B028709

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-05	Client Sample Name: JPL, MW-11-2, 10/24/2018 9:50:00AM, 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		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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-05	Client Sample Name: JPL, MW-11-2, 10/24/2018 9:50:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-05	Client Sample Name: JPL, MW-11-2, 10/24/2018 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)	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)	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	10/27/18 12:00	10/28/18 18:24	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-05	Client Sample Name: JPL, MW-11-2, 10/24/2018 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	10/27/18 12:00	10/28/18 18:24	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-05	Client Sample Name: JPL, MW-11-2, 10/24/2018 9:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/02/18 21:00	11/03/18 04:56	SAV	IC6	1	B029120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-05	Client Sample Name: JPL, MW-11-2, 10/24/2018 9:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/24/18 20:15	10/24/18 20:32		MIG	KONE-1	1	B028486
2	EPA-200.8	10/30/18 09:00	10/31/18 05:28		ARD	PE-EL4	1	B028709

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-06	Client Sample Name: JPL, MW-11-1, 10/24/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-06	Client Sample Name: JPL, MW-11-1, 10/24/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-06	Client Sample Name: JPL, MW-11-1, 10/24/2018 10:30:00AM, 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)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	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	10/27/18 12:00	10/28/18 18:47	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-06	Client Sample Name: JPL, MW-11-1, 10/24/2018 10:30:00AM, 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	10/27/18 12:00	10/28/18 18:47	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-06	Client Sample Name: JPL, MW-11-1, 10/24/2018 10:30:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	25	mg/L	0.50	0.077	EPA-300.0	ND		1
Nitrate as N	1.1	mg/L	0.10	0.021	EPA-300.0	ND		1
Sulfate	45	mg/L	1.0	0.13	EPA-300.0	ND		1
Nitrite as N	0.011	mg/L	0.050	0.010	EPA-353.2	ND	J	2
Perchlorate	ND	ug/L	4.0	0.92	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	10/24/18 22:00	10/25/18 04:23	SAV	IC8	1	B028394
2	EPA-353.2	10/25/18 08:34	10/25/18 08:38	MC1	KONE-1	1	B028511
3	EPA-314.0	11/02/18 21:00	11/03/18 05:11	SAV	IC6	1	B029120
4	EPA-365.1	10/25/18 07:54	10/25/18 08:03	MC1	SC-1	1	B028525

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-06	Client Sample Name: JPL, MW-11-1, 10/24/2018 10:30:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/24/18 20:15	10/24/18 20:32		MIG	KONE-1	1	B028486
2	EPA-200.8	10/30/18 09:00	10/31/18 05:32		ARD	PE-EL4	1	B028709

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-07	Client Sample Name: JPL, MW-26-2, 10/24/2018 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
Chloroform	1.9	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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-07	Client Sample Name: JPL, MW-26-2, 10/24/2018 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	1.9	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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-07	Client Sample Name: JPL, MW-26-2, 10/24/2018 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)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	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	10/27/18 12:00	10/28/18 19:10	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-07	Client Sample Name: JPL, MW-26-2, 10/24/2018 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	10/27/18 12:00	10/28/18 19:10	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-07	Client Sample Name: JPL, MW-26-2, 10/24/2018 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.1	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/02/18 21:00	11/03/18 12:15	SAV	IC6	1	B029120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-07	Client Sample Name: JPL, MW-26-2, 10/24/2018 12:00:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0011	mg/L	0.0020	0.00070	EPA-7196	ND	J	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

Run #	Method	Prep Date	Run		Instrument	Dilution	QC
			Date/Time	Analyst			Batch ID
1	EPA-7196	10/24/18 20:15	10/24/18 20:32	MIG	KONE-1	1	B028486
2	EPA-200.8	10/30/18 09:00	10/31/18 05:35	ARD	PE-EL4	1	B028709

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-08	Client Sample Name: JPL, DUP-6-4Q18, 10/24/2018 12:10:00PM, 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	1.6	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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-08	Client Sample Name: JPL, DUP-6-4Q18, 10/24/2018 12:10:00PM, 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	1.4	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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-08	Client Sample Name: JPL, DUP-6-4Q18, 10/24/2018 12:10:00PM, 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)	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	10/27/18 12:00	10/28/18 19:33	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-08	Client Sample Name: JPL, DUP-6-4Q18, 10/24/2018 12:10:00PM, 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	10/27/18 12:00	10/28/18 19:33	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-08	Client Sample Name: JPL, DUP-6-4Q18, 10/24/2018 12:10:00PM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	3.2	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/05/18 16:46	TMS	IC6	1	B029212

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-08	Client Sample Name: JPL, DUP-6-4Q18, 10/24/2018 12:10:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0014	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/24/18 20:15	10/24/18 21:08		MIG	KONE-1	1	B028487
2	EPA-200.8	10/30/18 09:00	10/31/18 05:39		ARD	PE-EL4	1	B028709

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-09	Client Sample Name: JPL, MW-26-1, 10/24/2018 12:50:00PM, 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
Chloroform	0.34	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-09	Client Sample Name: JPL, MW-26-1, 10/24/2018 12:50:00PM, 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	0.36	ug/L	0.50	0.23	EPA-524.2	ND	J	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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-09	Client Sample Name: JPL, MW-26-1, 10/24/2018 12:50:00PM, 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)	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)	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	10/27/18 12:00	10/28/18 19:57	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-09	Client Sample Name: JPL, MW-26-1, 10/24/2018 12:50:00PM, 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	10/27/18 12:00	10/28/18 19:57	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-09	Client Sample Name: JPL, MW-26-1, 10/24/2018 12:50:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.5	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/05/18 17:01	TMS	IC6	1	B029212

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-09	Client Sample Name: JPL, MW-26-1, 10/24/2018 12:50:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00083	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/24/18 20:15	10/24/18 21:08		MIG	KONE-1	1	B028487
2	EPA-200.8	10/30/18 09:00	10/31/18 05:42		ARD	PE-EL4	1	B028709

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-10	Client Sample Name: JPL, EB-7-102418, 10/24/2018 12:20:00PM, 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
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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-10	Client Sample Name: JPL, EB-7-102418, 10/24/2018 12:20:00PM, 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
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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-10	Client Sample Name: JPL, EB-7-102418, 10/24/2018 12:20:00PM, 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)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.5	%	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	10/27/18 12:00	10/28/18 20:20	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-10	Client Sample Name: JPL, EB-7-102418, 10/24/2018 12:20:00PM, 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	10/27/18 12:00	10/28/18 20:20	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-10	Client Sample Name: JPL, EB-7-102418, 10/24/2018 12:20:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/05/18 17:16	TMS	IC6	1	B029212

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-10	Client Sample Name: JPL, EB-7-102418, 10/24/2018 12:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	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-7196	10/24/18 20:15	10/24/18 21:08		MIG	KONE-1	1	B028487
2	EPA-200.8	10/30/18 09:00	10/31/18 05:46		ARD	PE-EL4	1	B028709

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-11	Client Sample Name: JPL, MW-15, 10/24/2018 10:59:00AM, 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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-11	Client Sample Name: JPL, MW-15, 10/24/2018 10:59:00AM, 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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-11	Client Sample Name: JPL, MW-15, 10/24/2018 10:59:00AM, 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)	98.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.6	%	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	10/27/18 09:00	10/27/18 22:00	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-11	Client Sample Name: JPL, MW-15, 10/24/2018 10:59:00AM, 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	10/27/18 09:00	10/27/18 22:00	MGC	MS-V5	1	B028563

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-11	Client Sample Name: JPL, MW-15, 10/24/2018 10:59:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/02/18 21:00	11/03/18 05:42	SAV	IC6	1	B029120

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-11	Client Sample Name: JPL, MW-15, 10/24/2018 10:59:00AM, Blaine Tech							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	19	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-7196	10/24/18 20:15	10/24/18 20:15	MIG	KONE-1	1	B028485
2	EPA-200.8	10/30/18 09:00	10/31/18 04:50	ARD	PE-EL4	1	B028709

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-12	Client Sample Name: JPL, MW-1, 10/24/2018 12:20:00PM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-12	Client Sample Name: JPL, MW-1, 10/24/2018 12:20:00PM, 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
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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-12	Client Sample Name: JPL, MW-1, 10/24/2018 12:20:00PM, 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)	97.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.3	%	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	10/27/18 12:00	10/28/18 04:33	MGC	MS-V5	1	B028564

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-12	Client Sample Name: JPL, MW-1, 10/24/2018 12:20:00PM, 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	10/27/18 12:00	10/28/18 04:33	MGC	MS-V5	1	B028564

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-12	Client Sample Name: JPL, MW-1, 10/24/2018 12:20:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/05/18 17:32	TMS	IC6	1	B029212

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-12	Client Sample Name: JPL, MW-1, 10/24/2018 12:20:00PM, Blaine Tech							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	0.68	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-7196	10/24/18 20:15	10/24/18 20:31	MIG	KONE-1	1	B028486
2	EPA-200.8	10/30/18 08:55	11/01/18 14:18	ARD	PE-EL4	1	B028708

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-13	Client Sample Name: JPL, MW-9, 10/24/2018 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
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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-13	Client Sample Name: JPL, MW-9, 10/24/2018 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
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: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833531-13	Client Sample Name: JPL, MW-9, 10/24/2018 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)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.1	%	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	10/27/18 12:00	10/28/18 21:06	MGC	MS-V5	1	B028565

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833531-13	Client Sample Name: JPL, MW-9, 10/24/2018 1:30:00PM, 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	10/27/18 12:00	10/28/18 21:06	MGC	MS-V5	1	B028565

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Tidewater Inc.
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Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833531-13	Client Sample Name: JPL, MW-9, 10/24/2018 1:30:00PM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/05/18 19:04	SAV	IC6	1	B029213

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833531-13	Client Sample Name: JPL, MW-9, 10/24/2018 1:30:00PM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	130	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-7196	10/24/18 20:15	10/24/18 21:08		MIG	KONE-1	1	B028487
2	EPA-200.8	10/30/18 08:55	10/31/18 15:02		ARD	PE-EL4	1	B028708

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Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028563						
Benzene	B028563-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B028563-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B028563-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B028563-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B028563-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B028563-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B028563-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B028563-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B028563-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B028563-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B028563-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B028563-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B028563-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B028563-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B028563-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B028563-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B028563-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B028563-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B028563-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B028563-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B028563-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B028563-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B028563-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B028563-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B028563-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B028563-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B028563-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B028563-BLK1	ND	ug/L	0.50	0.14	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028563						
trans-1,3-Dichloropropene	B028563-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B028563-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B028563-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B028563-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B028563-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B028563-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B028563-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B028563-BLK1	ND	ug/L	0.50	0.12	
Styrene	B028563-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B028563-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B028563-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethane	B028563-BLK1	ND	ug/L	0.50	0.23	
Toluene	B028563-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B028563-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B028563-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B028563-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B028563-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B028563-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B028563-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B028563-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B028563-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B028563-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B028563-BLK1	ND	ug/L	0.50	0.18	
Acetone	B028563-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B028563-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B028563-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B028563-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B028563-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B028563-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B028563-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B028563-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B028563-BLK1	ND	ug/L	4.0	1.3	

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B028563

Ethyl t-butyl ether	B028563-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B028563-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B028563-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B028563-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B028563-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B028563-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B028563-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B028563-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B028563-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B028563-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B028563-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B028563-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B028563-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B028563-BLK1	99.3	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B028563-BLK1	97.3	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B028563-BLK1	104	%	80 - 120 (LCL - UCL)		

QC Batch ID: B028564

Benzene	B028564-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B028564-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B028564-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B028564-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B028564-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B028564-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B028564-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B028564-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B028564-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B028564-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B028564-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B028564-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B028564-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B028564-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B028564-BLK1	ND	ug/L	0.50	0.093	

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Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028564						
Dibromochloromethane	B028564-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B028564-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B028564-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B028564-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B028564-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B028564-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B028564-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B028564-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B028564-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B028564-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B028564-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B028564-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B028564-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B028564-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B028564-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B028564-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B028564-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B028564-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B028564-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B028564-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B028564-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B028564-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B028564-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B028564-BLK1	ND	ug/L	0.50	0.12	
Styrene	B028564-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B028564-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B028564-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B028564-BLK1	ND	ug/L	0.50	0.23	
Toluene	B028564-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B028564-BLK1	ND	ug/L	0.50	0.15	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028564						
1,1,1-Trichloroethane	B028564-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B028564-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B028564-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B028564-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B028564-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B028564-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B028564-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B028564-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B028564-BLK1	ND	ug/L	0.50	0.18	
Acetone	B028564-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B028564-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B028564-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B028564-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B028564-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B028564-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B028564-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B028564-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B028564-BLK1	ND	ug/L	4.0	1.3	
Ethyl t-butyl ether	B028564-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B028564-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B028564-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B028564-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B028564-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B028564-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B028564-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B028564-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B028564-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B028564-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B028564-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B028564-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B028564-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B028564-BLK1	100	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B028564-BLK1	99.3	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B028564-BLK1	105	%	80 - 120 (LCL - UCL)		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028565						
Benzene	B028565-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B028565-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B028565-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B028565-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B028565-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B028565-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B028565-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B028565-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B028565-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B028565-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B028565-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B028565-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B028565-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B028565-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B028565-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B028565-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B028565-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B028565-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B028565-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B028565-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B028565-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B028565-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B028565-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B028565-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B028565-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B028565-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B028565-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B028565-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B028565-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B028565-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B028565-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B028565-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B028565-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B028565-BLK1	ND	ug/L	0.50	0.14	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028565						
trans-1,3-Dichloropropene	B028565-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B028565-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B028565-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B028565-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B028565-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B028565-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B028565-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B028565-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B028565-BLK1	ND	ug/L	0.50	0.12	
Styrene	B028565-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B028565-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B028565-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B028565-BLK1	ND	ug/L	0.50	0.23	
Toluene	B028565-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B028565-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B028565-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B028565-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B028565-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B028565-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B028565-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B028565-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B028565-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B028565-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B028565-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B028565-BLK1	ND	ug/L	0.50	0.18	
Acetone	B028565-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B028565-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B028565-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B028565-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B028565-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B028565-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B028565-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B028565-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B028565-BLK1	ND	ug/L	4.0	1.3	

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Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028565						
Ethyl t-butyl ether	B028565-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B028565-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B028565-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B028565-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B028565-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B028565-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B028565-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B028565-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B028565-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B028565-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B028565-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B028565-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B028565-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B028565-BLK1	110	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B028565-BLK1	97.9	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B028565-BLK1	106	%	80 - 120 (LCL - UCL)		

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Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028563										
Benzene	B028563-BS1	LCS	25.580	25.000	ug/L	102		70 - 130		
Bromodichloromethane	B028563-BS1	LCS	23.180	25.000	ug/L	92.7		70 - 130		
Chlorobenzene	B028563-BS1	LCS	24.440	25.000	ug/L	97.8		70 - 130		
Chloroethane	B028563-BS1	LCS	28.160	25.000	ug/L	113		70 - 130		
1,4-Dichlorobenzene	B028563-BS1	LCS	24.200	25.000	ug/L	96.8		70 - 130		
1,1-Dichloroethane	B028563-BS1	LCS	27.020	25.000	ug/L	108		70 - 130		
1,1-Dichloroethene	B028563-BS1	LCS	26.980	25.000	ug/L	108		70 - 130		
Toluene	B028563-BS1	LCS	24.400	25.000	ug/L	97.6		70 - 130		
Trichloroethene	B028563-BS1	LCS	26.060	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B028563-BS1	LCS	10.030	10.000	ug/L	100		75 - 125		
Toluene-d8 (Surrogate)	B028563-BS1	LCS	9.8600	10.000	ug/L	98.6		80 - 120		
4-Bromofluorobenzene (Surrogate)	B028563-BS1	LCS	10.000	10.000	ug/L	100		80 - 120		
QC Batch ID: B028564										
Benzene	B028564-BS1	LCS	25.470	25.000	ug/L	102		70 - 130		
Bromodichloromethane	B028564-BS1	LCS	22.730	25.000	ug/L	90.9		70 - 130		
Chlorobenzene	B028564-BS1	LCS	23.560	25.000	ug/L	94.2		70 - 130		
Chloroethane	B028564-BS1	LCS	26.960	25.000	ug/L	108		70 - 130		
1,4-Dichlorobenzene	B028564-BS1	LCS	22.950	25.000	ug/L	91.8		70 - 130		
1,1-Dichloroethane	B028564-BS1	LCS	26.550	25.000	ug/L	106		70 - 130		
1,1-Dichloroethene	B028564-BS1	LCS	25.500	25.000	ug/L	102		70 - 130		
Toluene	B028564-BS1	LCS	24.020	25.000	ug/L	96.1		70 - 130		
Trichloroethene	B028564-BS1	LCS	25.380	25.000	ug/L	102		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B028564-BS1	LCS	9.9000	10.000	ug/L	99.0		75 - 125		
Toluene-d8 (Surrogate)	B028564-BS1	LCS	9.8600	10.000	ug/L	98.6		80 - 120		
4-Bromofluorobenzene (Surrogate)	B028564-BS1	LCS	10.110	10.000	ug/L	101		80 - 120		
QC Batch ID: B028565										
Benzene	B028565-BS1	LCS	24.030	25.000	ug/L	96.1		70 - 130		
Bromodichloromethane	B028565-BS1	LCS	24.580	25.000	ug/L	98.3		70 - 130		
Chlorobenzene	B028565-BS1	LCS	23.920	25.000	ug/L	95.7		70 - 130		
Chloroethane	B028565-BS1	LCS	25.230	25.000	ug/L	101		70 - 130		
1,4-Dichlorobenzene	B028565-BS1	LCS	23.740	25.000	ug/L	95.0		70 - 130		
1,1-Dichloroethane	B028565-BS1	LCS	25.310	25.000	ug/L	101		70 - 130		
1,1-Dichloroethene	B028565-BS1	LCS	26.400	25.000	ug/L	106		70 - 130		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028565										
Toluene	B028565-BS1	LCS	23.140	25.000	ug/L	92.6		70 - 130		
Trichloroethene	B028565-BS1	LCS	29.730	25.000	ug/L	119		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B028565-BS1	LCS	10.700	10.000	ug/L	107		75 - 125		
Toluene-d8 (Surrogate)	B028565-BS1	LCS	9.7800	10.000	ug/L	97.8		80 - 120		
4-Bromofluorobenzene (Surrogate)	B028565-BS1	LCS	10.320	10.000	ug/L	103		80 - 120		

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Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B028563 and Used client sample: Y - Description: MW-15, 10/24/2018 10:59.

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: B028564 and Used client sample: Y - Description: MW-1, 10/24/2018 12:20.

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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 Quails. Includes two QC Batch sections (B028564 and B028565) with detailed data for various compounds like 1,1-Dichloroethene, Toluene, etc.

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B028563

Chloroacetonitrile	B028563-BLK1	0	ug/L			
1-Chlorobutane	B028563-BLK1	0	ug/L			
1,1-Dichloropropanone	B028563-BLK1	0	ug/L			
Methyl acrylate	B028563-BLK1	0	ug/L			
Nitrobenzene	B028563-BLK1	0	ug/L			
2-Nitropropane	B028563-BLK1	0	ug/L			

QC Batch ID: B028564

Chloroacetonitrile	B028564-BLK1	0	ug/L			
1-Chlorobutane	B028564-BLK1	0	ug/L			
1,1-Dichloropropanone	B028564-BLK1	0	ug/L			
Methyl acrylate	B028564-BLK1	0	ug/L			
Nitrobenzene	B028564-BLK1	0	ug/L			
2-Nitropropane	B028564-BLK1	0	ug/L			

QC Batch ID: B028565

Chloroacetonitrile	B028565-BLK1	0	ug/L			
1-Chlorobutane	B028565-BLK1	0	ug/L			
1,1-Dichloropropanone	B028565-BLK1	0	ug/L			
Methyl acrylate	B028565-BLK1	0	ug/L			
Nitrobenzene	B028565-BLK1	0	ug/L			
2-Nitropropane	B028565-BLK1	0	ug/L			

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Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028394						
Chloride	B028394-BLK1	ND	mg/L	0.50	0.077	
Nitrate as N	B028394-BLK1	ND	mg/L	0.10	0.021	
Sulfate	B028394-BLK1	ND	mg/L	1.0	0.13	
QC Batch ID: B028511						
Nitrite as N	B028511-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: B028525						
ortho-Phosphate as P	B028525-BLK1	ND	mg/L	0.050	0.017	
QC Batch ID: B029120						
Perchlorate	B029120-BLK1	ND	ug/L	4.0	0.92	
QC Batch ID: B029212						
Perchlorate	B029212-BLK1	ND	ug/L	4.0	0.92	
QC Batch ID: B029213						
Perchlorate	B029213-BLK1	ND	ug/L	4.0	0.92	

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Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028394										
Chloride	B028394-BS1	LCS	52.731	50.000	mg/L	105		90 - 110		
Nitrate as N	B028394-BS1	LCS	5.1850	5.0000	mg/L	104		90 - 110		
Sulfate	B028394-BS1	LCS	104.51	100.00	mg/L	105		90 - 110		
QC Batch ID: B028511										
Nitrite as N	B028511-BS1	LCS	0.48228	0.50000	mg/L	96.5		90 - 110		
QC Batch ID: B028525										
ortho-Phosphate as P	B028525-BS1	LCS	0.50180	0.50000	mg/L	100		90 - 110		
QC Batch ID: B029120										
Perchlorate	B029120-BS1	LCS	10.180	10.000	ug/L	102		85 - 115		
QC Batch ID: B029212										
Perchlorate	B029212-BS1	LCS	10.745	10.000	ug/L	107		85 - 115		
QC Batch ID: B029213										
Perchlorate	B029213-BS1	LCS	10.408	10.000	ug/L	104		85 - 115		

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Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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 Quas. Includes QC Batch IDs B028394, B028511, B028525, B029120, B029212, and B029213.

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Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B028485						
Hexavalent Chromium	B028485-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028486						
Hexavalent Chromium	B028486-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028487						
Hexavalent Chromium	B028487-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028708						
Total Recoverable Chromium	B028708-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B028709						
Total Recoverable Chromium	B028709-BLK1	ND	ug/L	3.0	0.50	

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Project: JPL- GW Monitoring Wells
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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	
QC Batch ID: B028485										
Hexavalent Chromium	B028485-BS1	LCS	0.049957	0.050000	mg/L	99.9		85 - 115		
QC Batch ID: B028486										
Hexavalent Chromium	B028486-BS1	LCS	0.050908	0.050000	mg/L	102		85 - 115		
QC Batch ID: B028487										
Hexavalent Chromium	B028487-BS1	LCS	0.051991	0.050000	mg/L	104		85 - 115		
QC Batch ID: B028708										
Total Recoverable Chromium	B028708-BS1	LCS	42.462	40.000	ug/L	106		85 - 115		
QC Batch ID: B028709										
Total Recoverable Chromium	B028709-BS1	LCS	41.231	40.000	ug/L	103		85 - 115		

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Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028485		Used client sample: Y - Description: MW-15, 10/24/2018 10:59								
Hexavalent Chromium	DUP	1833531-11	ND	ND		mg/L			10	
	MS	1833531-11	ND	0.055201	0.052632	mg/L		105		85 - 115
	MSD	1833531-11	ND	0.054504	0.052632	mg/L	1.3	104	10	85 - 115
QC Batch ID: B028486		Used client sample: Y - Description: MW-1, 10/24/2018 12:20								
Hexavalent Chromium	DUP	1833531-12	ND	ND		mg/L			10	
	MS	1833531-12	ND	0.053546	0.052632	mg/L		102		85 - 115
	MSD	1833531-12	ND	0.053580	0.052632	mg/L	0.1	102	10	85 - 115
QC Batch ID: B028487		Used client sample: Y - Description: MW-9, 10/24/2018 13:30								
Hexavalent Chromium	DUP	1833531-13	ND	ND		mg/L			10	
	MS	1833531-13	ND	0.056247	0.052632	mg/L		107		85 - 115
	MSD	1833531-13	ND	0.054561	0.052632	mg/L	3.0	104	10	85 - 115
QC Batch ID: B028708		Used client sample: Y - Description: MW-9, 10/24/2018 13:30								
Total Recoverable Chromium	DUP	1833531-13	125.17	121.35		ug/L	3.1		20	
	MS	1833531-13	125.17	162.44	40.000	ug/L		93.2		70 - 130
	MSD	1833531-13	125.17	162.02	40.000	ug/L	0.3	92.1	20	70 - 130
QC Batch ID: B028709		Used client sample: Y - Description: MW-15, 10/24/2018 10:59								
Total Recoverable Chromium	DUP	1833531-11	19.489	22.118		ug/L	12.6		20	
	MS	1833531-11	19.489	59.137	40.000	ug/L		99.1		70 - 130
	MSD	1833531-11	19.489	62.060	40.000	ug/L	4.8	106	20	70 - 130

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:44
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Notes And Definitions

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected
- PQL Practical Quantitation Limit



Date of Report: 11/09/2018

David Conner

Tidewater Inc.

3761 Attucks Drive
Powell, OH 43065

Client Project: 4Q18
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1833674
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 10/25/2018. 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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Quality Control Reports

Volatile Organic Analysis (EPA Method 524.2)

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Chain of Custody Form



Page 1 of 2

Required Fields

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

Project Description: JPL-GW Monitoring
 Project Code: 4Q18
 Sampler(s): Blaine Tech

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 Normal (10 - Days)
 Lab TAT Approval: *Additional Charges May Apply

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	Total Cr (200.8)	Perchlorate (EPA 314.0)	Chloride, Nitrate, Sulfate (300)	Orthophosphate (365.1)	Nitrite (353.2)	Hexavalent Cr (7196)
-1	TB-8-102518	10/25/18	0700	GW	X						
-2	MW-12-5	0745	6W		X						
-3	MW-12-4	0835	6W		X						
-4	MW-12-3	0930	6W		X						
-5	MW-12-2	0950	6W		X						
-6	FB-8-102518	10/15	6W		X						

Notes: MS/MSD

CHK BY: DISTRIBUTION

URGENT HOLDING TIME: DO NO. NO. NO. OP SS

Global ID: N1009

1. Relinquished By: [Signature] Date: 10/25/18 Time: 1430

2. Relinquished By: [Signature] Date: 10/25/18 Time: 1830

3. Relinquished By: [Signature] Date: 10/25/18 Time: 1830

Cost Center: MBU Site, CUX RCRA, Geotracker 5 File (CA Default), Geotracker 2 File, Other (Specify)

PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MS/MSD) 80% 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)

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



Report To: Tidewater, Inc.
 Client: Tidewater, Inc.
 Alt#: David Conner
 Street Address: 3761 Allucks Drive
 City: Powell State: OH Zip: 43065
 Phone: 628 298 5715 Fax: 614 792 2897
 Email Address: david.conner@bcloh2o.net
 Submission #: 18-33674

Project Description: JPL-GW Monitoring
 Project Code: 4Q18
 Sampler(s): Blaine Tech

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	Total Cr (200.8)	Perchlorate (EPA 314.0)	Chloride, Nitrate, Sulfate (300)	Orthophosphate (35.1)	Nitrite (35.2)	Hexavalent Cr (7196)
MW-5	MW-5	10-25-18	0745	W	X	X	X				
MW-8	MW-8	10-05	0845	↓	X	X	X				
MW-10	MW-10	07-15	0755	↓	X	X	X				
DUP-6-498	DUP-6-498	↓	0855	↓	X	X	X				
DUP-7-498	DUP-7-498	↓		↓	X	X	X				

Notes: MMSMSD

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 (MMSMSD) 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: MBU site CVX RCRA Geotracker 5 File (CA Default) Geotracker 2 File Other (Specify) _____

Global ID: _____

1. Relinquished By: _____ Date: 10/25/18 Time: 1440
 2. Relinquished By: Nicole _____ Date: 10/25/18 Time: 1440
 3. Relinquished By: _____ Date: 10/25/18 Time: 1830

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



BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 3

Submission #: 1833674

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 *Solid 25*

COC Received YES NO Emissivity: 0.08 Container: PE Thermometer ID: 208 Date/Time: 10/25 1830
 Temperature: (A) 1.7 °C / (C) 1.4 °C Analyst Init: EML

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES		GA	D	D	D	D				
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁶⁺										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		ED	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		ABF	ABC	ABC	ABC	ABC	ABC	ABC	ABC	ABC
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/509/5080										
QT EPA 515.1&150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 801SM										
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: -10 description doesn't match, used: with sampling time
 Sample Numbering Completed By: GSI Date/Time: 10/25 1830
 A = Actual / C = Corrected



BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 of 3

Submission #: 1833674

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: 0.08 Container: PE Thermometer ID: 208 Date/Time: 10/25/1830

Temperature: (A) 1.7 °C / (C) 1.4 °C Analyst Init: GMR

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / Box / 16oz PE UNPRES										
2oz Cr ⁶										
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	DBC									
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 508608/0080										
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: _____

Sample Numbering Completed By: GMR Date/Time: 10/25/1927

A = Actual / C = Corrected

Rev 21 05/23/2016
 IS:\WPB\Doc\Prod\Perfec\LAB COC\SI\FORM\AMR\F... 201

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BC LABORATORIES INC. COOLER RECEIPT FORM Page 3 of 3

Submission #: 1833674

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: 0.98 Container: PE Thermometer ID: 208 Date/Time: 10/25 1830

Temperature: (A) 1.4 °C / (C) 1.1 °C Analyst Init: EME

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES	0	61	64	65	66					
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁴⁺										
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 508/608/6060										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 543										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: -10 description doesn't match what with sampling time

Sample Numbering Completed By: _____ Date/Time: 10/25 1927

A = Actual / C = Corrected

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833674-01	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: TB-8-102518 Sampled By: Blaine Tech of BTST	Receive Date: 10/25/2018 18:30 Sampling Date: 10/25/2018 07:00 Sample Depth: --- Lab Matrix: Water Sample Type: Blank Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): TB-8-102518 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

1833674-02	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-12-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/25/2018 18:30 Sampling Date: 10/25/2018 07:45 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-12-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

1833674-03	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-12-4 Sampled By: Blaine Tech of BTST	Receive Date: 10/25/2018 18:30 Sampling Date: 10/25/2018 08:35 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833674-04	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-12-3 Sampled By: Blaine Tech of BTST	Receive Date: 10/25/2018 18:30 Sampling Date: 10/25/2018 09:30 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-12-3 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

1833674-05	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-12-2 Sampled By: Blaine Tech of BTST	Receive Date: 10/25/2018 18:30 Sampling Date: 10/25/2018 09:50 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-12-2 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

1833674-06	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: EB-8-102518 Sampled By: Blaine Tech of BTST	Receive Date: 10/25/2018 18:30 Sampling Date: 10/25/2018 10:15 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): EB-8-102518 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833674-07	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-5 Sampled By: Blaine Tech of BTST	Receive Date: 10/25/2018 18:30 Sampling Date: 10/25/2018 07:45 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-5 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1833674-08	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-8 Sampled By: Blaine Tech of BTST	Receive Date: 10/25/2018 18:30 Sampling Date: 10/25/2018 10:05 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-8 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1833674-09	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: MW-10 Sampled By: Blaine Tech of BTST	Receive Date: 10/25/2018 18:30 Sampling Date: 10/25/2018 08:45 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): MW-10 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	---	---

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

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

1833674-10	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: DUP-8-4Q18 Sampled By: Blaine Tech of BTST	Receive Date: 10/25/2018 18:30 Sampling Date: 10/25/2018 07:55 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-8-4Q18 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1833674-11	COC Number: --- Project Number: JPL Sampling Location: --- Sampling Point: DUP-7-4Q18 Sampled By: Blaine Tech of BTST	Receive Date: 10/25/2018 18:30 Sampling Date: 10/25/2018 08:55 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: 0000000000 Location ID (FieldPoint): DUP-7-4Q18 Matrix: WG Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-01	Client Sample Name: JPL, TB-8-102518, 10/25/2018 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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-01	Client Sample Name: JPL, TB-8-102518, 10/25/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-01	Client Sample Name: JPL, TB-8-102518, 10/25/2018 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)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	95.6	%	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	10/30/18 11:03	10/30/18 21:21	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833674-01	Client Sample Name: JPL, TB-8-102518, 10/25/2018 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	10/30/18 11:03	10/30/18 21:21	MGC	MS-V5	1	B028687

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-02	Client Sample Name: JPL, MW-12-5, 10/25/2018 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		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	0.20	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-02	Client Sample Name: JPL, MW-12-5, 10/25/2018 7:45:00AM, 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
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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-02	Client Sample Name: JPL, MW-12-5, 10/25/2018 7:45:00AM, 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		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)	96.4	%	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	10/30/18 11:03	10/30/18 19:02	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833674-02	Client Sample Name: JPL, MW-12-5, 10/25/2018 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	10/30/18 11:03	10/30/18 19:02	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833674-02	Client Sample Name: JPL, MW-12-5, 10/25/2018 7:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.2	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/05/18 23:25	SAV	IC6	1	B029214

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833674-02	Client Sample Name: JPL, MW-12-5, 10/25/2018 7:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.0014	mg/L	0.0020	0.00070	EPA-7196	ND	J	1
Total Recoverable Chromium	0.76	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-7196	10/25/18 20:22	10/25/18 20:22		MIG	KONE-1	1	B028518
2	EPA-200.8	10/30/18 08:55	11/01/18 13:37		ARD	PE-EL4	1	B028708

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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID:	1833674-03							
Client Sample Name:	JPL, MW-12-4, 10/25/2018 8:35:00AM, 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	0.19	ug/L	0.50	0.17	EPA-524.2	ND	J	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	0.36	ug/L	0.50	0.14	EPA-524.2	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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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-03	Client Sample Name: JPL, MW-12-4, 10/25/2018 8:35:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-03	Client Sample Name: JPL, MW-12-4, 10/25/2018 8:35:00AM, 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)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.8	%	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	10/30/18 11:03	10/30/18 21:44	MGC	MS-V5	1	B028687

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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833674-03	Client Sample Name: JPL, MW-12-4, 10/25/2018 8:35:00AM, 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	10/30/18 11:03	10/30/18 21:44	MGC	MS-V5	1	B028687

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833674-03	Client Sample Name: JPL, MW-12-4, 10/25/2018 8:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	2.2	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/06/18 01:00	SAV	IC6	1	B029214

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Tidewater Inc.
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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833674-03	Client Sample Name: JPL, MW-12-4, 10/25/2018 8:35:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	0.00083	mg/L	0.0020	0.00070	EPA-7196	ND	J	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-7196	10/25/18 20:22	10/25/18 20:22		MIG	KONE-1	1	B028518
2	EPA-200.8	10/30/18 08:55	11/01/18 13:41		ARD	PE-EL4	1	B028708

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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-04	Client Sample Name: JPL, MW-12-3, 10/25/2018 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	0.17	ug/L	0.50	0.17	EPA-524.2	ND	J	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	0.79	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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-04	Client Sample Name: JPL, MW-12-3, 10/25/2018 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
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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-04	Client Sample Name: JPL, MW-12-3, 10/25/2018 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		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)	97.6	%	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	10/30/18 11:03	10/30/18 22:07	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833674-04	Client Sample Name: JPL, MW-12-3, 10/25/2018 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	10/30/18 11:03	10/30/18 22:07	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833674-04	Client Sample Name: JPL, MW-12-3, 10/25/2018 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	1.2	ug/L	4.0	0.92	EPA-314.0	ND	J	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/06/18 01:15	SAV	IC6	1	B029214

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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833674-04	Client Sample Name: JPL, MW-12-3, 10/25/2018 9:30:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.7	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-7196	10/25/18 20:22	10/25/18 20:22		MIG	KONE-1	1	B028518
2	EPA-200.8	10/30/18 08:55	11/01/18 13:44		ARD	PE-EL4	1	B028708

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Tidewater Inc.
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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-05	Client Sample Name: JPL, MW-12-2, 10/25/2018 9:50:00AM, 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		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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-05	Client Sample Name: JPL, MW-12-2, 10/25/2018 9:50:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-05	Client Sample Name: JPL, MW-12-2, 10/25/2018 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)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.0	%	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	10/30/18 11:03	10/30/18 22:31	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833674-05	Client Sample Name: JPL, MW-12-2, 10/25/2018 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	10/30/18 11:03	10/30/18 22:31	MGC	MS-V5	1	B028687

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Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833674-05	Client Sample Name: JPL, MW-12-2, 10/25/2018 9:50:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/06/18 01:31	SAV	IC6	1	B029214

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833674-05	Client Sample Name: JPL, MW-12-2, 10/25/2018 9:50:00AM, Blaine Tech
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Chromium	1.4	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-7196	10/25/18 20:22	10/25/18 20:22		MIG	KONE-1	1	B028518
2	EPA-200.8	10/30/18 08:55	11/01/18 13:47		ARD	PE-EL4	1	B028708

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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-06	Client Sample Name: JPL, EB-8-102518, 10/25/2018 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-06	Client Sample Name: JPL, EB-8-102518, 10/25/2018 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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-06	Client Sample Name: JPL, EB-8-102518, 10/25/2018 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)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.0	%	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	10/30/18 11:03	10/30/18 22:54	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833674-06	Client Sample Name: JPL, EB-8-102518, 10/25/2018 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	10/30/18 11:03	10/30/18 22:54	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833674-06	Client Sample Name: JPL, EB-8-102518, 10/25/2018 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	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/06/18 01:46	SAV	IC6	1	B029214

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1833674-06	Client Sample Name: JPL, EB-8-102518, 10/25/2018 10:15:00AM, Blaine Tech							
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		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-7196	10/25/18 20:22	10/25/18 20:22		MIG	KONE-1	1	B028518
2	EPA-200.8	10/30/18 08:55	11/01/18 13:51		ARD	PE-EL4	1	B028708

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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-07	Client Sample Name: JPL, MW-5, 10/25/2018 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		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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-07	Client Sample Name: JPL, MW-5, 10/25/2018 7:45:00AM, 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
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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-07	Client Sample Name: JPL, MW-5, 10/25/2018 7:45:00AM, 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		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)	97.8	%	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	10/30/18 11:03	10/30/18 23:17	MGC	MS-V5	1	B028687

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3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833674-07	Client Sample Name: JPL, MW-5, 10/25/2018 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	10/30/18 11:03	10/30/18 23:17	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833674-07	Client Sample Name: JPL, MW-5, 10/25/2018 7:45:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/06/18 02:02	SAV	IC6	1	B029214

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Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-08	Client Sample Name: JPL, MW-8, 10/25/2018 10:05:00AM, 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	2.5	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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-08	Client Sample Name: JPL, MW-8, 10/25/2018 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	0.23	ug/L	0.50	0.14	EPA-524.2	ND	J	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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-08	Client Sample Name: JPL, MW-8, 10/25/2018 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)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.5	%	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	10/30/18 11:06	10/31/18 01:12	MGC	MS-V5	1	B028730

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833674-08	Client Sample Name: JPL, MW-8, 10/25/2018 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	10/30/18 11:06	10/31/18 01:12	MGC	MS-V5	1	B028730

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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833674-08	Client Sample Name: JPL, MW-8, 10/25/2018 10:05:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	79	ug/L	40	9.2	EPA-314.0	ND	A07	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/06/18 13:32	TMS	IC6	10	B029215

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-09	Client Sample Name: JPL, MW-10, 10/25/2018 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		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	0.78	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	0.16	ug/L	0.50	0.15	EPA-524.2	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	0.22	ug/L	0.50	0.17	EPA-524.2	ND	J	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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-09	Client Sample Name: JPL, MW-10, 10/25/2018 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	0.67	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	5.8	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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-09	Client Sample Name: JPL, MW-10, 10/25/2018 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		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)	98.2	%	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	10/30/18 11:03	10/30/18 23:40	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833674-09	Client Sample Name: JPL, MW-10, 10/25/2018 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	10/30/18 11:03	10/30/18 23:40	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833674-09	Client Sample Name: JPL, MW-10, 10/25/2018 8:45:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	5.0	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/06/18 03:49	SAV	IC6	1	B029215

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-10	Client Sample Name: JPL, DUP-8-4Q18, 10/25/2018 7:55:00AM, 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		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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-10	Client Sample Name: JPL, DUP-8-4Q18, 10/25/2018 7:55:00AM, 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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-10	Client Sample Name: JPL, DUP-8-4Q18, 10/25/2018 7:55:00AM, 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)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.3	%	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	10/30/18 11:03	10/31/18 00:03	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833674-10	Client Sample Name: JPL, DUP-8-4Q18, 10/25/2018 7:55:00AM, 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	10/30/18 11:03	10/31/18 00:03	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833674-10	Client Sample Name: JPL, DUP-8-4Q18, 10/25/2018 7:55:00AM, Blaine Tech
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	ND	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/06/18 04:04	SAV	IC6	1	B029215

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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-11	Client Sample Name: JPL, DUP-7-4Q18, 10/25/2018 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		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	0.79	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	0.15	ug/L	0.50	0.15	EPA-524.2	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	0.38	ug/L	0.50	0.27	EPA-524.2	ND	J	1
trans-1,2-Dichloroethene	0.18	ug/L	0.50	0.17	EPA-524.2	ND	J	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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-11		Client Sample Name: JPL, DUP-7-4Q18, 10/25/2018 8:55:00AM, 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	0.76	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	6.2	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: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1833674-11	Client Sample Name: JPL, DUP-7-4Q18, 10/25/2018 8:55:00AM, 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)	108	%	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	10/30/18 11:03	10/31/18 00:26	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1833674-11	Client Sample Name: JPL, DUP-7-4Q18, 10/25/2018 8:55:00AM, 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	10/30/18 11:03	10/31/18 00:26	MGC	MS-V5	1	B028687

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1833674-11	Client Sample Name: JPL, DUP-7-4Q18, 10/25/2018 8:55:00AM, Blaine Tech
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Perchlorate	5.0	ug/L	4.0	0.92	EPA-314.0	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-314.0	11/05/18 11:00	11/06/18 04:20	SAV	IC6	1	B029215

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028687						
Benzene	B028687-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B028687-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B028687-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B028687-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B028687-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B028687-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B028687-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B028687-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B028687-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B028687-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B028687-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B028687-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B028687-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B028687-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B028687-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B028687-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B028687-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B028687-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B028687-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B028687-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B028687-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B028687-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B028687-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B028687-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B028687-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B028687-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B028687-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B028687-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B028687-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B028687-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B028687-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B028687-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B028687-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B028687-BLK1	ND	ug/L	0.50	0.14	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028687						
trans-1,3-Dichloropropene	B028687-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B028687-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B028687-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B028687-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B028687-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B028687-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B028687-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B028687-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B028687-BLK1	ND	ug/L	0.50	0.12	
Styrene	B028687-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B028687-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B028687-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B028687-BLK1	ND	ug/L	0.50	0.23	
Toluene	B028687-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B028687-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B028687-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B028687-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B028687-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B028687-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B028687-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B028687-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B028687-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B028687-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B028687-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B028687-BLK1	ND	ug/L	0.50	0.18	
Acetone	B028687-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B028687-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B028687-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B028687-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B028687-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B028687-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B028687-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B028687-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B028687-BLK1	ND	ug/L	4.0	1.3	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B028687

Ethyl t-butyl ether	B028687-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B028687-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B028687-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B028687-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B028687-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B028687-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B028687-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B028687-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B028687-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B028687-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B028687-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B028687-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B028687-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B028687-BLK1	106	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B028687-BLK1	98.4	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B028687-BLK1	103	%	80 - 120 (LCL - UCL)		

QC Batch ID: B028730

Benzene	B028730-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B028730-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B028730-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B028730-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B028730-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B028730-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B028730-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B028730-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B028730-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B028730-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B028730-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B028730-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B028730-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B028730-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B028730-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B028730-BLK1	ND	ug/L	0.50	0.093	

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Tidewater Inc.
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Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028730						
Dibromochloromethane	B028730-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B028730-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B028730-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B028730-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B028730-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B028730-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B028730-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B028730-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B028730-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B028730-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B028730-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B028730-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B028730-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B028730-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B028730-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B028730-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B028730-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B028730-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B028730-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B028730-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B028730-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B028730-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B028730-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B028730-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B028730-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B028730-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B028730-BLK1	ND	ug/L	0.50	0.12	
Styrene	B028730-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B028730-BLK1	ND	ug/L	0.50	0.21	
1,1,1,2,2-Tetrachloroethane	B028730-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B028730-BLK1	ND	ug/L	0.50	0.23	
Toluene	B028730-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B028730-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B028730-BLK1	ND	ug/L	0.50	0.15	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B028730						
1,1,1-Trichloroethane	B028730-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B028730-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B028730-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B028730-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B028730-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B028730-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B028730-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B028730-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B028730-BLK1	ND	ug/L	0.50	0.18	
Acetone	B028730-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B028730-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B028730-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B028730-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B028730-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	B028730-BLK1	ND	ug/L	1.0	0.48	
trans-1,4-Dichloro-2-butene	B028730-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B028730-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B028730-BLK1	ND	ug/L	4.0	1.3	
Ethyl t-butyl ether	B028730-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B028730-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B028730-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B028730-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B028730-BLK1	ND	ug/L	10	3.3	
Methyl iodide	B028730-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B028730-BLK1	ND	ug/L	10	2.4	
Methyl methacrylate	B028730-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B028730-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B028730-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B028730-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B028730-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B028730-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	B028730-BLK1	111	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	B028730-BLK1	97.3	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	B028730-BLK1	103	%	80 - 120 (LCL - UCL)		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B028687										
Benzene	B028687-BS1	LCS	23.180	25.000	ug/L	92.7		70 - 130		
Bromodichloromethane	B028687-BS1	LCS	23.740	25.000	ug/L	95.0		70 - 130		
Chlorobenzene	B028687-BS1	LCS	24.020	25.000	ug/L	96.1		70 - 130		
Chloroethane	B028687-BS1	LCS	24.790	25.000	ug/L	99.2		70 - 130		
1,4-Dichlorobenzene	B028687-BS1	LCS	24.620	25.000	ug/L	98.5		70 - 130		
1,1-Dichloroethane	B028687-BS1	LCS	25.290	25.000	ug/L	101		70 - 130		
1,1-Dichloroethene	B028687-BS1	LCS	25.390	25.000	ug/L	102		70 - 130		
Toluene	B028687-BS1	LCS	23.790	25.000	ug/L	95.2		70 - 130		
Trichloroethene	B028687-BS1	LCS	25.500	25.000	ug/L	102		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B028687-BS1	LCS	10.310	10.000	ug/L	103		75 - 125		
Toluene-d8 (Surrogate)	B028687-BS1	LCS	9.4700	10.000	ug/L	94.7		80 - 120		
4-Bromofluorobenzene (Surrogate)	B028687-BS1	LCS	10.040	10.000	ug/L	100		80 - 120		

QC Batch ID: B028730										
Benzene	B028730-BS1	LCS	22.000	25.000	ug/L	88.0		70 - 130		
Bromodichloromethane	B028730-BS1	LCS	23.820	25.000	ug/L	95.3		70 - 130		
Chlorobenzene	B028730-BS1	LCS	23.120	25.000	ug/L	92.5		70 - 130		
Chloroethane	B028730-BS1	LCS	22.720	25.000	ug/L	90.9		70 - 130		
1,4-Dichlorobenzene	B028730-BS1	LCS	23.320	25.000	ug/L	93.3		70 - 130		
1,1-Dichloroethane	B028730-BS1	LCS	24.360	25.000	ug/L	97.4		70 - 130		
1,1-Dichloroethene	B028730-BS1	LCS	24.850	25.000	ug/L	99.4		70 - 130		
Toluene	B028730-BS1	LCS	23.030	25.000	ug/L	92.1		70 - 130		
Trichloroethene	B028730-BS1	LCS	26.380	25.000	ug/L	106		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B028730-BS1	LCS	10.690	10.000	ug/L	107		75 - 125		
Toluene-d8 (Surrogate)	B028730-BS1	LCS	9.8100	10.000	ug/L	98.1		80 - 120		
4-Bromofluorobenzene (Surrogate)	B028730-BS1	LCS	9.9600	10.000	ug/L	99.6		80 - 120		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B028687 and Used client sample: Y - Description: MW-12-5, 10/25/2018 07:45.

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: B028730 and Used client sample: Y - Description: MW-8, 10/25/2018 10:05.

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Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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 Quals
								Percent Recovery	Percent Recovery	
QC Batch ID: B028730		Used client sample: Y - Description: MW-8, 10/25/2018 10:05								
1,1-Dichloroethene	MS	1833674-08	ND	25.150	25.000	ug/L		101		70 - 130
	MSD	1833674-08	ND	25.870	25.000	ug/L	2.8	103	20	70 - 130
Toluene	MS	1833674-08	ND	23.770	25.000	ug/L		95.1		70 - 130
	MSD	1833674-08	ND	24.210	25.000	ug/L	1.8	96.8	20	70 - 130
Trichloroethene	MS	1833674-08	ND	24.310	25.000	ug/L		97.2		70 - 130
	MSD	1833674-08	ND	25.320	25.000	ug/L	4.1	101	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1833674-08	ND	10.390	10.000	ug/L		104		75 - 125
	MSD	1833674-08	ND	10.490	10.000	ug/L	1.0	105		75 - 125
Toluene-d8 (Surrogate)	MS	1833674-08	ND	9.7700	10.000	ug/L		97.7		80 - 120
	MSD	1833674-08	ND	9.8000	10.000	ug/L	0.3	98.0		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1833674-08	ND	10.090	10.000	ug/L		101		80 - 120
	MSD	1833674-08	ND	10.260	10.000	ug/L	1.7	103		80 - 120

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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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: B028687

Chloroacetonitrile	B028687-BLK1	0	ug/L			
1-Chlorobutane	B028687-BLK1	0	ug/L			
1,1-Dichloropropanone	B028687-BLK1	0	ug/L			
Methyl acrylate	B028687-BLK1	0	ug/L			
Nitrobenzene	B028687-BLK1	0	ug/L			
2-Nitropropane	B028687-BLK1	0	ug/L			

QC Batch ID: B028730

Chloroacetonitrile	B028730-BLK1	0	ug/L			
1-Chlorobutane	B028730-BLK1	0	ug/L			
1,1-Dichloropropanone	B028730-BLK1	0	ug/L			
Methyl acrylate	B028730-BLK1	0	ug/L			
Nitrobenzene	B028730-BLK1	0	ug/L			
2-Nitropropane	B028730-BLK1	0	ug/L			

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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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
QC Batch ID: B029214						
Perchlorate	B029214-BLK1	ND	ug/L	4.0	0.92	
QC Batch ID: B029215						
Perchlorate	B029215-BLK1	ND	ug/L	4.0	0.92	

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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	
QC Batch ID: B029214										
Perchlorate	B029214-BS1	LCS	10.436	10.000	ug/L	104		85	115	
QC Batch ID: B029215										
Perchlorate	B029215-BS1	LCS	10.429	10.000	ug/L	104		85	115	

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Powell, OH 43065

Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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	RPD	
QC Batch ID: B029214		Used client sample: Y - Description: MW-12-5, 10/25/2018 07:45								
Perchlorate	DUP	1833674-02	2.1621	2.0712		ug/L	4.3		15	J
	MS	1833674-02	2.1621	12.914	10.101	ug/L		106	80 - 120	
	MSD	1833674-02	2.1621	12.993	10.101	ug/L	0.6	107	15 80 - 120	
QC Batch ID: B029215		Used client sample: Y - Description: MW-8, 10/25/2018 10:05								
Perchlorate	DUP	833674-08RE2	78.831	76.955		ug/L	2.4		15	
	MS	833674-08RE2	78.831	197.46	101.01	ug/L		117	80 - 120	
	MSD	833674-08RE2	78.831	196.39	101.01	ug/L	0.5	116	15 80 - 120	

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Tidewater Inc.
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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
Project Manager: David Conner

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B028518						
Hexavalent Chromium	B028518-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: B028708						
Total Recoverable Chromium	B028708-BLK1	ND	ug/L	3.0	0.50	

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Reported: 11/09/2018 17:45
Project: JPL- GW Monitoring Wells
Project Number: 4Q18
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		
QC Batch ID: B028518											
Hexavalent Chromium	B028518-BS1	LCS	0.052786	0.050000	mg/L	106		85 - 115			
QC Batch ID: B028708											
Total Recoverable Chromium	B028708-BS1	LCS	42.462	40.000	ug/L	106		85 - 115			

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Project Number: 4Q18
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 Quals
								Percent Recovery	RPD	
QC Batch ID: B028518		Used client sample: Y - Description: MW-12-5, 10/25/2018 07:45								
Hexavalent Chromium	DUP	1833674-02	0.0013850	0.0014474		mg/L	4.4		10	J
	MS	1833674-02	0.0013850	0.056376	0.052632	mg/L		104	85 - 115	
	MSD	1833674-02	0.0013850	0.052834	0.050000	mg/L	6.5	103	10	85 - 115
QC Batch ID: B028708		Used client sample: Y - Description: MW-9, 10/24/2018 13:30								
Total Recoverable Chromium	DUP	1833531-13	125.17	121.35		ug/L	3.1		20	
	MS	1833531-13	125.17	162.44	40.000	ug/L		93.2		70 - 130
	MSD	1833531-13	125.17	162.02	40.000	ug/L	0.3	92.1	20	70 - 130

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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.