ATTACHMENT 3-A: LABORATORY ANALYTICAL REPORTS

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

Date of Report: 05/07/2015

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 2nd Qtr. 2015
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1509442
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 4/20/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.

Chain of Custody Form

*Required Fields

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Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:*(614) 792 - 2897 Fax#: (614) 792- 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-094442

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)
-1	TB-1-4/20/15	4-20-15	0630	AQ	X								
-2	SB-1-4/20/15		0650		X	X	X	X	X	X			
-3	EB-1-4/20/15		0900		X	X	X	X	X	X			
-4	MW-11-5		0740		X	X	X	X	X	X			
-5	MW-11-4		0820		X	X	X	X	X	X			
-6	MW-11-3		0855		X	X	X	X	X	X			
-7	MW-11-2		0930		X	X	X	X	X	X			
-8	MW-11-1		1000		X	X	X	X	X	X	X		
-9	MW-14-5		1120		X	X	X	X	X	X			
-10	MW-14-4		1200		X	X	X	X	X	X			
-11	MW-14-3		1240		X	X	X	X	X	X			

Notes

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

MS/MSD
Level IV

CHK BY DISTRIBUTION
SUB-OUT ☐

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

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

Lab TAT Approval: _____ *Additional Charges May Apply

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

Relinquished By:	Date	Time	Received By:	Date	Time
1. [signature]	4-20-15	1600	1. [signature]	4/20/15	1600
2. [signature]	4/20/15	1610	2. [signature]	4/20/14	1610
3. [signature]	4/20/15	1900	3. [signature]	4-20-15	1900

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.

Chain of Custody Form

*Required Fields

Page 2 of 2

Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:*(614) 792 - 2897 Fax#: (614) 792- 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-0942/42

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)		Notes
-12	MW-14-2	4-20-15	1320	AQ	X	X	X	X	X	X					
-13	MW-14-1	↓	1400	↓	X	X	X	X	X	X					
-14	DUP-1-2Q15	↓	1250	↓	X	X	X	X	X	X					

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

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

Lab TAT Approval: _____ *Additional Charges May Apply

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By: [signature]	4-20-15	1600	1.Received By: Nicole	4/20/15	1610
2. Relinquished By: Nicole	4/20/15	1610	2.Received By: [signature]	4/20/15	1610
3. Relinquished By: [signature]	4/20/15	1900	3.Received By: [signature]	4-20-15	1900

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Chain of Custody and Cooler Receipt Form for 1509442 Page 3 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 2

Submission #: 15-09442

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: DE Thermometer ID: 908 Date/Time 4/20/15 1902
Temperature: (A) 0.7 °C / (C) 0.5 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL		D	D	D	D	G	D	D	D	D
PT PE UNPRESERVED								E		
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		E	E	E	E	H	E	F	E	E
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		ABC	ABC	ABC	ABC	A-F	ABC	ABC	ABC	ABC
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: M Date/Time: 4-20-15 1911 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1509442 Page 4 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 2 Of 2

Submission #: 15-09442

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 097 Container: DE Thermometer ID: 008 Date/Time 4/20/15 1902
Temperature: (A) 0.7 °C / (C) 0.5 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL	D	D	D	D						
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	E	E	E	E						
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABC	ABC	ABC	ABC						
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By:_____ Date/Time: 4-20-15 1914 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509442-01	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 06:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-1-4/20/15	**Lab Matrix:**	Water
	Sampled By:	BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-1-4/20/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509442-02	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 06:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-1-4/20/15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): SB-1-4/20/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509442-03	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 07:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-1-4/20/15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-1-4/20/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509442-04	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 07:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509442-05	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 08:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509442-06	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 08:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509442-07	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 09:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509442-08	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 10:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509442-09	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 11:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509442-10	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 12:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509442-11	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 12:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509442-12	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 13:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509442-13	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 14:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509442-14	**COC Number:**	---	**Receive Date:**	04/20/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/20/2015 12:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-1-2Q15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-1-2Q15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-01 | **Client Sample Name:** JPL-GW, TB-1-4/20/15, 4/20/2015 6:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-01 | **Client Sample Name:** JPL-GW, TB-1-4/20/15, 4/20/2015 6:30:00AM

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-01 | **Client Sample Name:** JPL-GW, TB-1-4/20/15, 4/20/2015 6:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/21/15	04/21/15 11:40	MGC	MS-V5	1	BYD1639

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-01 | **Client Sample Name:** JPL-GW, TB-1-4/20/15, 4/20/2015 6:30:00AM

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	04/21/15	04/21/15 11:40	MGC	MS-V5	1	BYD1639

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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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-02 | **Client Sample Name:** JPL-GW, SB-1-4/20/15, 4/20/2015 6:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-02 | **Client Sample Name:** JPL-GW, SB-1-4/20/15, 4/20/2015 6:50:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-02 | **Client Sample Name:** JPL-GW, SB-1-4/20/15, 4/20/2015 6:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	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	04/21/15	04/21/15 12:02	MGC	MS-V5	1	BYD1639

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-02 | **Client Sample Name:** JPL-GW, SB-1-4/20/15, 4/20/2015 6:50:00AM, 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	04/21/15	04/21/15 12:02	MGC	MS-V5	1	BYD1639

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-02 | **Client Sample Name:** JPL-GW, SB-1-4/20/15, 4/20/2015 6:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	**0.15**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND	**J**	1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.14**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND	**J**	3
Nitrate as N	**0.030**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**0.28**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND	**J**	3
pH	**5.85**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/22/15	04/24/15 19:31	JRG	PE-OP2	1	BYD1954
2	SM-2320B	04/22/15	04/22/15 14:39	RML	MET-1	1	BYD1964
3	EPA-300.0	04/21/15	04/21/15 02:50	OLH	IC5	1	BYD1761
4	EPA-150.1	04/22/15	04/22/15 14:39	RML	MET-1	1	BYD1964
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	0.667	BYD1970
6	EPA-353.2	04/20/15	04/20/15 23:56	TDC	KONE-1	1	BYD1797
7	EPA-314.0	04/22/15	04/23/15 02:30	OLH	IC6	1	BYD2138

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-02 | **Client Sample Name:** JPL-GW, SB-1-4/20/15, 4/20/2015 6:50:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.82**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.1	**J**	2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 22:58	TDC	KONE-1	1	BYD1828
2	EPA-200.8	04/22/15	04/22/15 17:52	SRM	PE-EL2	1	BYD1915
3	EPA-200.7	04/22/15	04/24/15 19:31	JRG	PE-OP2	1	BYD1954

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-03 | **Client Sample Name:** JPL-GW, EB-1-4/20/15, 4/20/2015 7:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-03 | **Client Sample Name:** JPL-GW, EB-1-4/20/15, 4/20/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-03 | **Client Sample Name:** JPL-GW, EB-1-4/20/15, 4/20/2015 7:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.1	%	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	04/21/15	04/21/15 12:25	MGC	MS-V5	1	BYD1639

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-03 | **Client Sample Name:** JPL-GW, EB-1-4/20/15, 4/20/2015 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	04/21/15	04/21/15 12:25	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-03 | **Client Sample Name:** JPL-GW, EB-1-4/20/15, 4/20/2015 7:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	**0.14**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND	**J**	1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.26**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND	**J**	3
Nitrate as N	**0.031**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**0.29**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND	**J**	3
pH	**5.67**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/22/15	04/24/15 19:41	JRG	PE-OP2	1	BYD1954
2	SM-2320B	04/22/15	04/22/15 14:45	RML	MET-1	1	BYD1964
3	EPA-300.0	04/21/15	04/21/15 03:08	OLH	IC5	1	BYD1761
4	EPA-150.1	04/22/15	04/22/15 14:45	RML	MET-1	1	BYD1964
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	0.667	BYD1970
6	EPA-353.2	04/20/15	04/20/15 23:56	TDC	KONE-1	1	BYD1797
7	EPA-314.0	04/22/15	04/23/15 02:44	OLH	IC6	1	BYD2138

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-03 | **Client Sample Name:** JPL-GW, EB-1-4/20/15, 4/20/2015 7:00:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.1	**J**	2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 22:58	TDC	KONE-1	1	BYD1828
2	EPA-200.8	04/22/15	04/22/15 17:55	SRM	PE-EL2	1	BYD1915
3	EPA-200.7	04/22/15	04/24/15 19:41	JRG	PE-OP2	1	BYD1954

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-04 | **Client Sample Name:** JPL-GW, MW-11-5, 4/20/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-04 | **Client Sample Name:** JPL-GW, MW-11-5, 4/20/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.15**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-04 | **Client Sample Name:** JPL-GW, MW-11-5, 4/20/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.1	%	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	04/21/15	04/21/15 12:48	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-04 | **Client Sample Name:** JPL-GW, MW-11-5, 4/20/2015 7:40:00AM, 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	04/21/15	04/21/15 12:48	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-04 | **Client Sample Name:** JPL-GW, MW-11-5, 4/20/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**22**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**2.4**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**54**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**160**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**130**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**11**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.055**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**18**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.02**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**220**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/22/15	04/24/15 19:43	JRG	PE-OP2	1	BYD1954
2	SM-2320B	04/22/15	04/22/15 16:20	RML	MET-1	1	BYD1965
3	EPA-300.0	04/21/15	04/21/15 03:25	OLH	IC5	1	BYD1761
4	EPA-150.1	04/22/15	04/22/15 16:20	RML	MET-1	1	BYD1965
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	2	BYD1970
6	EPA-353.2	04/20/15	04/20/15 23:56	TDC	KONE-1	1	BYD1797
7	EPA-314.0	04/22/15	04/23/15 02:58	OLH	IC6	1	BYD2138

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-04 | **Client Sample Name:** JPL-GW, MW-11-5, 4/20/2015 7:40:00AM, 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 Arsenic	**6.1**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**2.4**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.1	**J**	2
Total Recoverable Iron	**540**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	**0.37**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 22:58	TDC	KONE-1	1	BYD1828
2	EPA-200.8	04/22/15	04/22/15 17:58	SRM	PE-EL2	1	BYD1915
3	EPA-200.7	04/22/15	04/24/15 19:43	JRG	PE-OP2	1	BYD1954

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-05 | **Client Sample Name:** JPL-GW, MW-11-4, 4/20/2015 8:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-05 | **Client Sample Name:** JPL-GW, MW-11-4, 4/20/2015 8:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.19**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.53**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-05 | **Client Sample Name:** JPL-GW, MW-11-4, 4/20/2015 8:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.7	%	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	04/21/15	04/21/15 13:11	MGC	MS-V5	1	BYD1639

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-05 | **Client Sample Name:** JPL-GW, MW-11-4, 4/20/2015 8:20:00AM, 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	04/21/15	04/21/15 13:11	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-05 | **Client Sample Name:** JPL-GW, MW-11-4, 4/20/2015 8:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**12**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**12**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**27**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**120**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**6.4**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**110**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**11**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**1.5**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.59**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**160**	**mg/L**	**10**	**10**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/22/15	04/24/15 19:46	JRG	PE-OP2	1	BYD1954
2	SM-2320B	04/22/15	04/22/15 16:35	RML	MET-1	1	BYD1965
3	EPA-300.0	04/21/15	04/21/15 03:42	OLH	IC5	1	BYD1761
4	EPA-150.1	04/22/15	04/22/15 16:35	RML	MET-1	1	BYD1965
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	1	BYD1970
6	EPA-353.2	04/20/15	04/20/15 23:56	TDC	KONE-1	1	BYD1797
7	EPA-314.0	04/22/15	04/23/15 03:11	OLH	IC6	1	BYD2138

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-05 | **Client Sample Name:** JPL-GW, MW-11-4, 4/20/2015 8:20:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.81**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.1	**J**	2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 22:58	TDC	KONE-1	1	BYD1828
2	EPA-200.8	04/22/15	04/22/15 18:02	SRM	PE-EL2	1	BYD1915
3	EPA-200.7	04/22/15	04/24/15 19:46	JRG	PE-OP2	1	BYD1954

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-06 | **Client Sample Name:** JPL-GW, MW-11-3, 4/20/2015 8:55:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.19**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-06 | **Client Sample Name:** JPL-GW, MW-11-3, 4/20/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.11**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.11**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-06 | **Client Sample Name:** JPL-GW, MW-11-3, 4/20/2015 8:55:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.7	%	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	04/21/15	04/21/15 09:24	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-06 | **Client Sample Name:** JPL-GW, MW-11-3, 4/20/2015 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	04/21/15	04/21/15 09:24	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-06 | **Client Sample Name:** JPL-GW, MW-11-3, 4/20/2015 8:55:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**44**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**14**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**28**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**11**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.10**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**24**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.00**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**260**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/22/15	04/24/15 19:15	JRG	PE-OP2	1	BYD1954
2	SM-2320B	04/22/15	04/22/15 16:43	RML	MET-1	1	BYD1965
3	EPA-300.0	04/21/15	04/21/15 01:41	OLH	IC5	1	BYD1761
4	EPA-150.1	04/22/15	04/22/15 16:43	RML	MET-1	1	BYD1965
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	2	BYD1970
6	EPA-353.2	04/20/15	04/20/15 23:56	TDC	KONE-1	1	BYD1797
7	EPA-314.0	04/22/15	04/23/15 03:25	OLH	IC6	1	BYD2138

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-06 | **Client Sample Name:** JPL-GW, MW-11-3, 4/20/2015 8:55:00AM, 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 Arsenic	**0.72**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.1	**J**	2
Total Recoverable Iron	**49**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 23:19	TDC	KONE-1	1	BYD1828
2	EPA-200.8	04/22/15	04/22/15 17:17	SRM	PE-EL2	1	BYD1915
3	EPA-200.7	04/22/15	04/24/15 19:15	JRG	PE-OP2	1	BYD1954

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-07 | **Client Sample Name:** JPL-GW, MW-11-2, 4/20/2015 9:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-07 | **Client Sample Name:** JPL-GW, MW-11-2, 4/20/2015 9:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.080**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-07 | **Client Sample Name:** JPL-GW, MW-11-2, 4/20/2015 9:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/21/15	04/21/15 13:33	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-07 | **Client Sample Name:** JPL-GW, MW-11-2, 4/20/2015 9:30:00AM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/21/15	04/21/15 13:33	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-07 | **Client Sample Name:** JPL-GW, MW-11-2, 4/20/2015 9:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**51**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**19**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**24**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**16**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**35**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.06**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**310**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/22/15	04/24/15 19:49	JRG	PE-OP2	1	BYD1954
2	SM-2320B	04/22/15	04/22/15 16:51	RML	MET-1	1	BYD1965
3	EPA-300.0	04/21/15	04/21/15 04:35	OLH	IC5	1	BYD1761
4	EPA-150.1	04/22/15	04/22/15 16:51	RML	MET-1	1	BYD1965
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	2	BYD1970
6	EPA-353.2	04/20/15	04/21/15 00:01	TDC	KONE-1	1	BYD1797
7	EPA-314.0	04/22/15	04/23/15 03:39	OLH	IC6	1	BYD2138

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-07 | **Client Sample Name:** JPL-GW, MW-11-2, 4/20/2015 9:30:00AM, 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 Arsenic	**1.0**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.9**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.1	**J**	2
Total Recoverable Iron	**320**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 23:05	TDC	KONE-1	1	BYD1828
2	EPA-200.8	04/22/15	04/22/15 18:05	SRM	PE-EL2	1	BYD1915
3	EPA-200.7	04/22/15	04/24/15 19:49	JRG	PE-OP2	1	BYD1954

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-08 | **Client Sample Name:** JPL-GW, MW-11-1, 4/20/2015 10:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-08 | **Client Sample Name:** JPL-GW, MW-11-1, 4/20/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.17**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-08 | **Client Sample Name:** JPL-GW, MW-11-1, 4/20/2015 10:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	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	04/21/15	04/21/15 13:56	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-08 | **Client Sample Name:** JPL-GW, MW-11-1, 4/20/2015 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	04/21/15	04/21/15 13:56	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-08 | **Client Sample Name:** JPL-GW, MW-11-1, 4/20/2015 10:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**60**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**20**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**28**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**18**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.22**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**32**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.89**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**320**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7
ortho-Phosphate as P	**0.015**	**mg/L**	**0.020**	**0.0057**	**EPA-365.1**	ND	**J**	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/22/15	04/24/15 19:51	JRG	PE-OP2	1	BYD1954
2	SM-2320B	04/22/15	04/22/15 16:59	RML	MET-1	1	BYD1965
3	EPA-300.0	04/21/15	04/21/15 04:52	OLH	IC5	1	BYD1761
4	EPA-150.1	04/22/15	04/22/15 16:59	RML	MET-1	1	BYD1965
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	2	BYD1970
6	EPA-353.2	04/20/15	04/21/15 00:01	TDC	KONE-1	1	BYD1797
7	EPA-314.0	04/22/15	04/23/15 03:53	OLH	IC6	1	BYD2138
8	EPA-365.1	04/21/15	04/21/15 11:41	TDC	KONE-1	1	BYD1800

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-08 | **Client Sample Name:** JPL-GW, MW-11-1, 4/20/2015 10:00:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.1	**J**	2
Total Recoverable Iron	**170**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 23:05	TDC	KONE-1	1	BYD1828
2	EPA-200.8	04/22/15	04/22/15 18:08	SRM	PE-EL2	1	BYD1915
3	EPA-200.7	04/22/15	04/24/15 19:51	JRG	PE-OP2	1	BYD1954

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-09 | **Client Sample Name:** JPL-GW, MW-14-5, 4/20/2015 11:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.27**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-09 | **Client Sample Name:** JPL-GW, MW-14-5, 4/20/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-09 | **Client Sample Name:** JPL-GW, MW-14-5, 4/20/2015 11:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	92.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.4	%	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	04/21/15	04/21/15 14:19	MGC	MS-V5	1	BYD1639

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-09 | **Client Sample Name:** JPL-GW, MW-14-5, 4/20/2015 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	04/21/15	04/21/15 14:19	MGC	MS-V5	1	BYD1639

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-09 | **Client Sample Name:** JPL-GW, MW-14-5, 4/20/2015 11:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**20**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**14**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**35**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**150**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**4.0**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**130**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**12**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.15**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**19**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.40**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**220**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/22/15	04/24/15 19:54	JRG	PE-OP2	1	BYD1954
2	SM-2320B	04/22/15	04/22/15 18:07	RML	MET-1	1	BYD1966
3	EPA-300.0	04/21/15	04/21/15 05:09	OLH	IC5	1	BYD1761
4	EPA-150.1	04/22/15	04/22/15 18:07	RML	MET-1	1	BYD1966
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	2	BYD1970
6	EPA-353.2	04/20/15	04/21/15 00:01	TDC	KONE-1	1	BYD1797
7	EPA-314.0	04/22/15	04/23/15 04:07	OLH	IC6	1	BYD2138

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-09 | **Client Sample Name:** JPL-GW, MW-14-5, 4/20/2015 11:20:00AM, 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 Arsenic	**1.0**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.6**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.1	**J**	2
Total Recoverable Iron	**57**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 23:05	TDC	KONE-1	1	BYD1828
2	EPA-200.8	04/22/15	04/22/15 18:11	SRM	PE-EL2	1	BYD1915
3	EPA-200.7	04/22/15	04/24/15 19:54	JRG	PE-OP2	1	BYD1954

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-10 | **Client Sample Name:** JPL-GW, MW-14-4, 4/20/2015 12:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.13**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	**0.080**	**ug/L**	**0.50**	**0.072**	**EPA-524.2**	ND	**J**	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-10 | **Client Sample Name:** JPL-GW, MW-14-4, 4/20/2015 12:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.16**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-10 | **Client Sample Name:** JPL-GW, MW-14-4, 4/20/2015 12:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.1	%	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	04/21/15	04/21/15 14:41	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-10 | **Client Sample Name:** JPL-GW, MW-14-4, 4/20/2015 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	04/21/15	04/21/15 14:41	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-10 | **Client Sample Name:** JPL-GW, MW-14-4, 4/20/2015 12:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**77**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**28**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**35**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.4**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**59**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**12**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**62**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.02**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**450**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**4.4**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/22/15	04/24/15 19:57	JRG	PE-OP2	1	BYD1954
2	SM-2320B	04/22/15	04/22/15 18:22	RML	MET-1	1	BYD1966
3	EPA-300.0	04/21/15	04/21/15 05:27	OLH	IC5	1	BYD1761
4	EPA-150.1	04/22/15	04/22/15 18:22	RML	MET-1	1	BYD1966
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	2	BYD1970
6	EPA-353.2	04/20/15	04/21/15 00:01	TDC	KONE-1	1	BYD1797
7	EPA-314.0	04/22/15	04/23/15 04:21	OLH	IC6	1	BYD2138

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-10 | **Client Sample Name:** JPL-GW, MW-14-4, 4/20/2015 12:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0013**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**3.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.1		2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 23:05	TDC	KONE-1	1	BYD1828
2	EPA-200.8	04/22/15	04/22/15 18:14	SRM	PE-EL2	1	BYD1915
3	EPA-200.7	04/22/15	04/24/15 19:57	JRG	PE-OP2	1	BYD1954

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-11 | **Client Sample Name:** JPL-GW, MW-14-3, 4/20/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.51**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	**0.090**	**ug/L**	**0.50**	**0.072**	**EPA-524.2**	ND	**J**	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.33**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.17**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-11 | **Client Sample Name:** JPL-GW, MW-14-3, 4/20/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.70**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	**0.25**	**ug/L**	**0.50**	**0.16**	**EPA-524.2**	ND	**J**	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.5**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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3761 Attucks Drive
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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-11 | **Client Sample Name:** JPL-GW, MW-14-3, 4/20/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.4	%	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	04/21/15	04/21/15 15:04	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-11 | **Client Sample Name:** JPL-GW, MW-14-3, 4/20/2015 12:40:00PM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/21/15	04/21/15 15:04	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-11 | **Client Sample Name:** JPL-GW, MW-14-3, 4/20/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**130**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**54**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**46**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**290**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**230**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**110**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**15**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**170**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.88**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**730**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**5.1**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/22/15	04/24/15 19:59	JRG	PE-OP2	1	BYD1954
2	SM-2320B	04/22/15	04/22/15 18:31	RML	MET-1	2	BYD1966
3	EPA-300.0	04/21/15	04/21/15 08:55	OLH	IC5	1	BYD1761
4	EPA-150.1	04/22/15	04/22/15 18:31	RML	MET-1	1	BYD1966
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	5	BYD1970
6	EPA-353.2	04/20/15	04/21/15 00:01	TDC	KONE-1	1	BYD1797
7	EPA-314.0	04/22/15	04/23/15 04:34	OLH	IC6	1	BYD2138

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-11 | **Client Sample Name:** JPL-GW, MW-14-3, 4/20/2015 12:40:00PM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.1	**J**	2
Total Recoverable Iron	**38**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 23:05	TDC	KONE-1	1	BYD1828
2	EPA-200.8	04/22/15	04/22/15 18:17	SRM	PE-EL2	1	BYD1915
3	EPA-200.7	04/22/15	04/24/15 19:59	JRG	PE-OP2	1	BYD1954

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-12 | **Client Sample Name:** JPL-GW, MW-14-2, 4/20/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.65**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.18**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.22**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	**0.16**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-12 | **Client Sample Name:** JPL-GW, MW-14-2, 4/20/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**3.9**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-12 | **Client Sample Name:** JPL-GW, MW-14-2, 4/20/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.8	%	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	04/21/15	04/21/15 15:27	MGC	MS-V5	1	BYD1639

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-12 | **Client Sample Name:** JPL-GW, MW-14-2, 4/20/2015 1:20:00PM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/21/15	04/21/15 15:27	MGC	MS-V5	1	BYD1639

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-12 | **Client Sample Name:** JPL-GW, MW-14-2, 4/20/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**150**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**53**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**44**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**290**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**240**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**120**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**13**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**190**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.73**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**830**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	**0.66**	**mg/L**	**0.25**	**0.060**	**EPA-353.2**	ND	**A07**	6
Perchlorate	**4.0**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/15	04/24/15 01:08	JRG	PE-OP2	1	BYD2066
2	SM-2320B	04/22/15	04/22/15 18:38	RML	MET-1	2	BYD1966
3	EPA-300.0	04/21/15	04/21/15 11:40	OLH	IC5	1	BYD1762
4	EPA-150.1	04/22/15	04/22/15 18:38	RML	MET-1	1	BYD1966
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	5	BYD1971
6	EPA-353.2	04/20/15	04/21/15 07:11	TDC	KONE-1	5	BYD1798
7	EPA-314.0	04/22/15	04/23/15 08:19	OLH	IC6	1	BYD2139

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-12 | **Client Sample Name:** JPL-GW, MW-14-2, 4/20/2015 1:20:00PM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.66**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**780**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 23:05	TDC	KONE-1	1	BYD1829
2	EPA-200.8	04/22/15	04/22/15 21:00	SRM	PE-EL2	1	BYD1916
3	EPA-200.7	04/23/15	04/24/15 01:08	JRG	PE-OP2	1	BYD2066

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-13 | **Client Sample Name:** JPL-GW, MW-14-1, 4/20/2015 2:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.43**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-13 | **Client Sample Name:** JPL-GW, MW-14-1, 4/20/2015 2:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	**0.19**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.14**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.1**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-13 | **Client Sample Name:** JPL-GW, MW-14-1, 4/20/2015 2:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.7	%	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	04/21/15	04/21/15 15:50	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-13 | **Client Sample Name:** JPL-GW, MW-14-1, 4/20/2015 2:00:00PM, 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	04/21/15	04/21/15 15:50	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-13 | **Client Sample Name:** JPL-GW, MW-14-1, 4/20/2015 2:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**140**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**46**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**63**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**140**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**13**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**200**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.35**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**830**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.5**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/15	04/24/15 00:52	JRG	PE-OP2	1	BYD2066
2	SM-2320B	04/22/15	04/22/15 18:45	RML	MET-1	2	BYD1966
3	EPA-300.0	04/21/15	04/21/15 11:57	OLH	IC5	1	BYD1762
4	EPA-150.1	04/22/15	04/22/15 18:45	RML	MET-1	1	BYD1966
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	5	BYD1971
6	EPA-353.2	04/20/15	04/21/15 00:05	TDC	KONE-1	1	BYD1798
7	EPA-314.0	04/22/15	04/23/15 08:33	OLH	IC6	1	BYD2139

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-13 | **Client Sample Name:** JPL-GW, MW-14-1, 4/20/2015 2:00:00PM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**24**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**4600**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 23:11	TDC	KONE-1	1	BYD1829
2	EPA-200.8	04/22/15	04/22/15 21:53	SRM	PE-EL2	1	BYD1916
3	EPA-200.7	04/23/15	04/24/15 00:52	JRG	PE-OP2	1	BYD2066

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-14 | **Client Sample Name:** JPL-GW, DUP-1-2Q15, 4/20/2015 12:50:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.52**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	**0.11**	**ug/L**	**0.50**	**0.072**	**EPA-524.2**	ND	**J**	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.36**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.20**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-14 | **Client Sample Name:** JPL-GW, DUP-1-2Q15, 4/20/2015 12:50:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.82**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	**0.26**	**ug/L**	**0.50**	**0.16**	**EPA-524.2**	ND	**J**	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.5**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509442-14 | **Client Sample Name:** JPL-GW, DUP-1-2Q15, 4/20/2015 12:50:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	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	04/21/15	04/21/15 16:12	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509442-14 | **Client Sample Name:** JPL-GW, DUP-1-2Q15, 4/20/2015 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	04/21/15	04/21/15 16:12	MGC	MS-V5	1	BYD1639

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509442-14 | **Client Sample Name:** JPL-GW, DUP-1-2Q15, 4/20/2015 12:50:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**130**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**53**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**46**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**290**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**230**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**110**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**15**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**170**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.96**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**740**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**6.0**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/15	04/24/15 01:18	JRG	PE-OP2	1	BYD2066
2	SM-2320B	04/22/15	04/22/15 18:52	RML	MET-1	2	BYD1966
3	EPA-300.0	04/21/15	04/21/15 12:15	OLH	IC5	1	BYD1762
4	EPA-150.1	04/22/15	04/22/15 18:52	RML	MET-1	1	BYD1966
5	EPA-160.1	04/23/15	04/23/15 10:30	CAD	MANUAL	5	BYD1971
6	EPA-353.2	04/20/15	04/21/15 00:05	TDC	KONE-1	1	BYD1798
7	EPA-314.0	04/22/15	04/23/15 08:47	OLH	IC6	1	BYD2139

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509442-14 | **Client Sample Name:** JPL-GW, DUP-1-2Q15, 4/20/2015 12:50:00PM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.69**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**140**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/20/15	04/20/15 23:11	TDC	KONE-1	1	BYD1829
2	EPA-200.8	04/22/15	04/22/15 21:56	SRM	PE-EL2	1	BYD1916
3	EPA-200.7	04/23/15	04/24/15 01:18	JRG	PE-OP2	1	BYD2066

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1639						
Benzene	BYD1639-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYD1639-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYD1639-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYD1639-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYD1639-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYD1639-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYD1639-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYD1639-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYD1639-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYD1639-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYD1639-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYD1639-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYD1639-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYD1639-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYD1639-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYD1639-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYD1639-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYD1639-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYD1639-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYD1639-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYD1639-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYD1639-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYD1639-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYD1639-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYD1639-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYD1639-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYD1639-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYD1639-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYD1639-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYD1639-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYD1639-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYD1639-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYD1639-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYD1639-BLK1	ND	ug/L	0.50	0.14	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1639						
trans-1,3-Dichloropropene	BYD1639-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYD1639-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYD1639-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYD1639-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYD1639-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYD1639-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BYD1639-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYD1639-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYD1639-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYD1639-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYD1639-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYD1639-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYD1639-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYD1639-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYD1639-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYD1639-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYD1639-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYD1639-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYD1639-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYD1639-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYD1639-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYD1639-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYD1639-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYD1639-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYD1639-BLK1	ND	ug/L	0.50	0.12	
Acetone	BYD1639-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BYD1639-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BYD1639-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BYD1639-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BYD1639-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BYD1639-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BYD1639-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BYD1639-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BYD1639-BLK1	ND	ug/L	4.0	0.97	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1639						
Ethyl t-butyl ether	BYD1639-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BYD1639-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BYD1639-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BYD1639-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BYD1639-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BYD1639-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BYD1639-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BYD1639-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BYD1639-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BYD1639-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BYD1639-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BYD1639-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYD1639-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYD1639-BLK1**	**96.6**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYD1639-BLK1**	**102**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYD1639-BLK1**	**99.4**	%	**80 - 120 (LCL - UCL)**		

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Tidewater Inc.
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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD1639										
Benzene	BYD1639-BS1	LCS	25.240	25.000	ug/L	101		70 - 130		
Bromodichloromethane	BYD1639-BS1	LCS	25.130	25.000	ug/L	101		70 - 130		
Chlorobenzene	BYD1639-BS1	LCS	26.280	25.000	ug/L	105		70 - 130		
Chloroethane	BYD1639-BS1	LCS	26.370	25.000	ug/L	105		70 - 130		
1,4-Dichlorobenzene	BYD1639-BS1	LCS	24.740	25.000	ug/L	99.0		70 - 130		
1,1-Dichloroethane	BYD1639-BS1	LCS	25.390	25.000	ug/L	102		70 - 130		
1,1-Dichloroethene	BYD1639-BS1	LCS	26.110	25.000	ug/L	104		70 - 130		
Toluene	BYD1639-BS1	LCS	25.030	25.000	ug/L	100		70 - 130		
Trichloroethene	BYD1639-BS1	LCS	26.340	25.000	ug/L	105		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYD1639-BS1	LCS	8.9300	10.000	ug/L	89.3		75 - 125		
Toluene-d8 (Surrogate)	BYD1639-BS1	LCS	10.100	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYD1639-BS1	LCS	9.8700	10.000	ug/L	98.7		80 - 120		

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD1639	Used client sample: Y - Description: MW-11-3, 04/20/2015 08:55										
Benzene	MS	1509442-06	ND	24.850	25.000	ug/L		99.4		70 - 130	
	MSD	1509442-06	ND	25.920	25.000	ug/L	4.2	104	20	70 - 130	
Bromodichloromethane	MS	1509442-06	ND	24.560	25.000	ug/L		98.2		70 - 130	
	MSD	1509442-06	ND	25.460	25.000	ug/L	3.6	102	20	70 - 130	
Chlorobenzene	MS	1509442-06	ND	25.200	25.000	ug/L		101		70 - 130	
	MSD	1509442-06	ND	26.160	25.000	ug/L	3.7	105	20	70 - 130	
Chloroethane	MS	1509442-06	ND	25.610	25.000	ug/L		102		70 - 130	
	MSD	1509442-06	ND	27.340	25.000	ug/L	6.5	109	20	70 - 130	
1,4-Dichlorobenzene	MS	1509442-06	ND	23.920	25.000	ug/L		95.7		70 - 130	
	MSD	1509442-06	ND	25.050	25.000	ug/L	4.6	100	20	70 - 130	
1,1-Dichloroethane	MS	1509442-06	ND	24.870	25.000	ug/L		99.5		70 - 130	
	MSD	1509442-06	ND	25.770	25.000	ug/L	3.6	103	20	70 - 130	
1,1-Dichloroethene	MS	1509442-06	ND	26.090	25.000	ug/L		104		70 - 130	
	MSD	1509442-06	ND	27.170	25.000	ug/L	4.1	109	20	70 - 130	
Toluene	MS	1509442-06	ND	24.630	25.000	ug/L		98.5		70 - 130	
	MSD	1509442-06	ND	25.320	25.000	ug/L	2.8	101	20	70 - 130	
Trichloroethene	MS	1509442-06	0.11000	25.980	25.000	ug/L		103		70 - 130	
	MSD	1509442-06	0.11000	26.690	25.000	ug/L	2.7	106	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1509442-06	ND	9.0500	10.000	ug/L		90.5		75 - 125	
	MSD	1509442-06	ND	9.3300	10.000	ug/L	3.0	93.3		75 - 125	
Toluene-d8 (Surrogate)	MS	1509442-06	ND	10.100	10.000	ug/L		101		80 - 120	
	MSD	1509442-06	ND	9.9200	10.000	ug/L	1.8	99.2		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1509442-06	ND	9.8700	10.000	ug/L		98.7		80 - 120	
	MSD	1509442-06	ND	9.8400	10.000	ug/L	0.3	98.4		80 - 120	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1639						
Chloroacetonitrile	BYD1639-BLK1	0	ug/L			
1-Chlorobutane	BYD1639-BLK1	0	ug/L			
1,1-Dichloropropanone	BYD1639-BLK1	0	ug/L			
Methyl acrylate	BYD1639-BLK1	0	ug/L			
Nitrobenzene	BYD1639-BLK1	0	ug/L			
2-Nitropropane	BYD1639-BLK1	0	ug/L			

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1761						
Chloride	BYD1761-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD1761-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD1761-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD1762						
Chloride	BYD1762-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD1762-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD1762-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD1797						
Nitrite as N	BYD1797-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD1798						
Nitrite as N	BYD1798-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD1800						
ortho-Phosphate as P	BYD1800-BLK1	ND	mg/L	0.020	0.0057	
QC Batch ID: BYD1954						
Total Recoverable Calcium	BYD1954-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	BYD1954-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	BYD1954-BLK1	ND	mg/L	0.50	0.017	
Total Recoverable Potassium	BYD1954-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD1964						
Bicarbonate	BYD1964-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD1964-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD1964-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD1965						
Bicarbonate	BYD1965-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD1965-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD1965-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD1966						
Bicarbonate	BYD1966-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD1966-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD1966-BLK1	ND	mg/L	4.1	4.1	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1970						
Total Dissolved Solids @ 180 C	BYD1970-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYD1971						
Total Dissolved Solids @ 180 C	BYD1971-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYD2066						
Total Recoverable Calcium	BYD2066-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	BYD2066-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	BYD2066-BLK1	ND	mg/L	0.50	0.017	
Total Recoverable Potassium	BYD2066-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD2138						
Perchlorate	BYD2138-BLK1	ND	ug/L	4.0	1.3	
QC Batch ID: BYD2139						
Perchlorate	BYD2139-BLK1	ND	ug/L	4.0	1.3	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD1761										
Chloride	BYD1761-BS1	LCS	52.584	50.000	mg/L	105		90 - 110		
Nitrate as N	BYD1761-BS1	LCS	5.2240	5.0000	mg/L	104		90 - 110		
Sulfate	BYD1761-BS1	LCS	104.32	100.00	mg/L	104		90 - 110		
QC Batch ID: BYD1762										
Chloride	BYD1762-BS1	LCS	52.970	50.000	mg/L	106		90 - 110		
Nitrate as N	BYD1762-BS1	LCS	5.2980	5.0000	mg/L	106		90 - 110		
Sulfate	BYD1762-BS1	LCS	105.53	100.00	mg/L	106		90 - 110		
QC Batch ID: BYD1797										
Nitrite as N	BYD1797-BS1	LCS	0.52270	0.50000	mg/L	105		90 - 110		
QC Batch ID: BYD1798										
Nitrite as N	BYD1798-BS1	LCS	0.51945	0.50000	mg/L	104		90 - 110		
QC Batch ID: BYD1800										
ortho-Phosphate as P	BYD1800-BS1	LCS	0.21898	0.20000	mg/L	109		90 - 110		
QC Batch ID: BYD1954										
Total Recoverable Calcium	BYD1954-BS1	LCS	10.637	10.000	mg/L	106		85 - 115		
Total Recoverable Magnesium	BYD1954-BS1	LCS	11.159	10.000	mg/L	112		85 - 115		
Total Recoverable Sodium	BYD1954-BS1	LCS	10.765	10.000	mg/L	108		85 - 115		
Total Recoverable Potassium	BYD1954-BS1	LCS	10.363	10.000	mg/L	104		85 - 115		
QC Batch ID: BYD1964										
Total Alkalinity as CaCO3	BYD1964-BS3	LCS	103.45	100.00	mg/L	103		90 - 110		
pH	BYD1964-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD1965										
Total Alkalinity as CaCO3	BYD1965-BS3	LCS	102.84	100.00	mg/L	103		90 - 110		
pH	BYD1965-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD1966										
Total Alkalinity as CaCO3	BYD1966-BS3	LCS	100.56	100.00	mg/L	101		90 - 110		
pH	BYD1966-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD1970										
Total Dissolved Solids @ 180 C	BYD1970-BS1	LCS	575.00	586.00	mg/L	98.1		90 - 110		
QC Batch ID: BYD1971										
Total Dissolved Solids @ 180 C	BYD1971-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
QC Batch ID: BYD2066										

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Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2066										
Total Recoverable Calcium	BYD2066-BS1	LCS	10.444	10.000	mg/L	104		85 - 115		
Total Recoverable Magnesium	BYD2066-BS1	LCS	10.811	10.000	mg/L	108		85 - 115		
Total Recoverable Sodium	BYD2066-BS1	LCS	10.575	10.000	mg/L	106		85 - 115		
Total Recoverable Potassium	BYD2066-BS1	LCS	10.164	10.000	mg/L	102		85 - 115		
QC Batch ID: BYD2138										
Perchlorate	BYD2138-BS1	LCS	10.762	10.000	ug/L	108		85 - 115		
QC Batch ID: BYD2139										
Perchlorate	BYD2139-BS1	LCS	10.762	10.000	ug/L	108		85 - 115		

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Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD1761	Used client sample: Y - Description: MW-11-3, 04/20/2015 08:55										
Chloride	DUP	1509442-06	11.086	11.154		mg/L	0.6		10		
	MS	1509442-06	11.086	66.848	50.505	mg/L		110		80 - 120	
	MSD	1509442-06	11.086	66.814	50.505	mg/L	0.1	110	10	80 - 120	
Nitrate as N	DUP	1509442-06	0.10200	0.094000		mg/L	8.2		10		J
	MS	1509442-06	0.10200	5.3747	5.0505	mg/L		104		80 - 120	
	MSD	1509442-06	0.10200	5.3960	5.0505	mg/L	0.4	105	10	80 - 120	
Sulfate	DUP	1509442-06	23.734	23.791		mg/L	0.2		10		
	MS	1509442-06	23.734	133.73	101.01	mg/L		109		80 - 120	
	MSD	1509442-06	23.734	133.79	101.01	mg/L	0.0	109	10	80 - 120	
QC Batch ID: BYD1762	Used client sample: Y - Description: MW-14-2, 04/20/2015 13:20										
Chloride	DUP	1509442-12	121.04	121.01		mg/L	0.0		10		
	MS	1509442-12	121.04	229.50	101.01	mg/L		107		80 - 120	
	MSD	1509442-12	121.04	229.18	101.01	mg/L	0.1	107	10	80 - 120	
Nitrate as N	DUP	1509442-12	13.018	13.062		mg/L	0.3		10		
	MS	1509442-12	13.018	23.541	10.101	mg/L		104		80 - 120	
	MSD	1509442-12	13.018	23.521	10.101	mg/L	0.1	104	10	80 - 120	
Sulfate	DUP	1509442-12	185.11	185.08		mg/L	0.0		10		
	MS	1509442-12	185.11	407.23	202.02	mg/L		110		80 - 120	
	MSD	1509442-12	185.11	406.85	202.02	mg/L	0.1	110	10	80 - 120	
QC Batch ID: BYD1797	Used client sample: Y - Description: MW-11-3, 04/20/2015 08:55										
Nitrite as N	DUP	1509442-06	ND	ND		mg/L			10		
	MS	1509442-06	ND	0.50875	0.52632	mg/L		96.7		90 - 110	
	MSD	1509442-06	ND	0.51136	0.52632	mg/L	0.5	97.2	10	90 - 110	
QC Batch ID: BYD1798	Used client sample: Y - Description: MW-14-2, 04/20/2015 13:20										
Nitrite as N	DUP	1509442-12	0.65689	0.65645		mg/L	0.1		10		
	MS	1509442-12	0.65689	1.1646	0.52632	mg/L		96.5		90 - 110	
	MSD	1509442-12	0.65689	1.1703	0.52632	mg/L	0.5	97.6	10	90 - 110	
QC Batch ID: BYD1800	Used client sample: Y - Description: MW-11-1, 04/20/2015 10:00										
ortho-Phosphate as P	DUP	1509442-08	0.015307	0.014691		mg/L	4.1		10		J
	MS	1509442-08	0.015307	0.23036	0.21053	mg/L		102		90 - 110	
	MSD	1509442-08	0.015307	0.21976	0.21053	mg/L	4.7	97.1	10	90 - 110	
QC Batch ID: BYD1954	Used client sample: Y - Description: MW-11-3, 04/20/2015 08:55										
Total Recoverable Calcium	DUP	**1509442-06**	**44.351**	**40.828**		**mg/L**	**8.3**		**20**		
	MS	**1509442-06**	**44.351**	**53.132**	**10.000**	**mg/L**		**87.8**		**75 - 125**	
	MSD	**1509442-06**	**44.351**	**51.429**	**10.000**	**mg/L**	**3.3**	**70.8**	**20**	**75 - 125**	**A03**

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD1954	Used client sample: Y - Description: MW-11-3, 04/20/2015 08:55										
Total Recoverable Magnesium	DUP	1509442-06	14.389	13.258		mg/L	8.2		20		
	MS	1509442-06	14.389	24.658	10.000	mg/L		103		75 - 125	
	MSD	1509442-06	14.389	23.804	10.000	mg/L	3.5	94.1	20	75 - 125	
Total Recoverable Sodium	DUP	1509442-06	27.870	25.785		mg/L	7.8		20		
	MS	1509442-06	27.870	37.442	10.000	mg/L		95.7		75 - 125	
	MSD	1509442-06	27.870	36.270	10.000	mg/L	3.2	84.0	20	75 - 125	
Total Recoverable Potassium	DUP	1509442-06	2.1060	1.9535		mg/L	7.5		20		
	MS	1509442-06	2.1060	12.513	10.000	mg/L		104		75 - 125	
	MSD	1509442-06	2.1060	12.073	10.000	mg/L	3.6	99.7	20	75 - 125	
QC Batch ID: BYD1964	Used client sample: N										
Bicarbonate	DUP	1509387-02	229.27	227.97		mg/L	0.6		10		
Carbonate	DUP	1509387-02	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1509387-02	188.04	186.97		mg/L	0.6		10		
pH	DUP	1509387-02	8.1900	8.1800		pH Units	0.1		20		
QC Batch ID: BYD1965	Used client sample: Y - Description: MW-11-5, 04/20/2015 07:40										
Bicarbonate	DUP	1509442-04	155.99	156.37		mg/L	0.2		10		
Carbonate	DUP	1509442-04	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1509442-04	127.94	128.25		mg/L	0.2		10		
pH	DUP	1509442-04	8.0200	8.0400		pH Units	0.2		20		
QC Batch ID: BYD1966	Used client sample: Y - Description: MW-14-5, 04/20/2015 11:20										
Bicarbonate	DUP	1509442-09	153.21	160.82		mg/L	4.8		10		
Carbonate	DUP	1509442-09	4.0111	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1509442-09	132.36	131.90		mg/L	0.3		10		
pH	DUP	1509442-09	8.4000	8.2400		pH Units	1.9		20		
QC Batch ID: BYD1970	Used client sample: Y - Description: MW-11-3, 04/20/2015 08:55										
Total Dissolved Solids @ 180 C	DUP	1509442-06	260.00	270.00		mg/L	3.8		10		
QC Batch ID: BYD1971	Used client sample: Y - Description: MW-14-2, 04/20/2015 13:20										
Total Dissolved Solids @ 180 C	DUP	1509442-12	830.00	810.00		mg/L	2.4		10		
QC Batch ID: BYD2066	Used client sample: Y - Description: MW-14-1, 04/20/2015 14:00										
Total Recoverable Calcium	DUP	1509442-13	140.32	135.62		mg/L	3.4		20		
	MS	1509442-13	140.32	152.31	10.000	mg/L		120		75 - 125	
	MSD	1509442-13	140.32	152.70	10.000	mg/L	0.3	124	20	75 - 125	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2066	Used client sample: Y - Description: MW-14-1, 04/20/2015 14:00										
Total Recoverable Magnesium	DUP	**1509442-13**	**46.363**	**46.035**		**mg/L**	**0.7**		**20**		
	MS	**1509442-13**	**46.363**	**59.325**	**10.000**	**mg/L**		**130**		**75 - 125**	**A03**
	MSD	**1509442-13**	**46.363**	**59.653**	**10.000**	**mg/L**	**0.6**	**133**	**20**	**75 - 125**	**A03**
Total Recoverable Sodium	DUP	1509442-13	63.106	61.103		mg/L	3.2		20		
	MS	1509442-13	63.106	74.442	10.000	mg/L		113		75 - 125	
	MSD	1509442-13	63.106	74.748	10.000	mg/L	0.4	116	20	75 - 125	
Total Recoverable Potassium	DUP	1509442-13	2.7896	2.7846		mg/L	0.2		20		
	MS	1509442-13	2.7896	13.464	10.000	mg/L		107		75 - 125	
	MSD	1509442-13	2.7896	13.753	10.000	mg/L	2.1	110	20	75 - 125	
QC Batch ID: BYD2138	Used client sample: Y - Description: MW-11-3, 04/20/2015 08:55										
Perchlorate	DUP	1509442-06	ND	ND		ug/L			15		
	MS	1509442-06	ND	20.841	20.202	ug/L		103		80 - 120	
	MSD	1509442-06	ND	21.606	20.202	ug/L	3.6	107	15	80 - 120	
QC Batch ID: BYD2139	Used client sample: Y - Description: MW-14-2, 04/20/2015 13:20										
Perchlorate	DUP	1509442-12	3.8536	3.8678		ug/L	0.4		15		J
	MS	1509442-12	3.8536	26.400	20.202	ug/L		112		80 - 120	
	MSD	1509442-12	3.8536	25.529	20.202	ug/L	3.4	107	15	80 - 120	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1828						
Hexavalent Chromium	BYD1828-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYD1829						
Hexavalent Chromium	BYD1829-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYD1915						
Total Recoverable Arsenic	BYD1915-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	**BYD1915-BLK1**	**1.1240**	**ug/L**	**3.0**	**0.50**	**J**
Total Recoverable Lead	BYD1915-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYD1916						
Total Recoverable Arsenic	BYD1916-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BYD1916-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BYD1916-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYD1954						
Total Recoverable Iron	BYD1954-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BYD2066						
Total Recoverable Iron	BYD2066-BLK1	ND	ug/L	50	6.5	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD1828										
Hexavalent Chromium	BYD1828-BS1	LCS	0.048279	0.050000	mg/L	96.6		85 - 115		
QC Batch ID: BYD1829										
Hexavalent Chromium	BYD1829-BS1	LCS	0.048987	0.050000	mg/L	98.0		85 - 115		
QC Batch ID: BYD1915										
Total Recoverable Arsenic	BYD1915-BS1	LCS	107.62	100.00	ug/L	108		85 - 115		
Total Recoverable Chromium	BYD1915-BS1	LCS	45.752	40.000	ug/L	114		85 - 115		
Total Recoverable Lead	BYD1915-BS1	LCS	112.82	100.00	ug/L	113		85 - 115		
QC Batch ID: BYD1916										
Total Recoverable Arsenic	BYD1916-BS1	LCS	103.90	100.00	ug/L	104		85 - 115		
Total Recoverable Chromium	BYD1916-BS1	LCS	42.379	40.000	ug/L	106		85 - 115		
Total Recoverable Lead	BYD1916-BS1	LCS	103.45	100.00	ug/L	103		85 - 115		
QC Batch ID: BYD1954										
Total Recoverable Iron	BYD1954-BS1	LCS	1141.1	1000.0	ug/L	114		85 - 115		
QC Batch ID: BYD2066										
Total Recoverable Iron	BYD2066-BS1	LCS	1138.9	1000.0	ug/L	114		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/07/2015 12:50
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD1828	Used client sample: Y - Description: MW-11-3, 04/20/2015 08:55										
Hexavalent Chromium	DUP	1509442-06	ND	ND		mg/L			10		
	MS	1509442-06	ND	0.051267	0.052632	mg/L		97.4		85 - 115	
	MSD	1509442-06	ND	0.050973	0.052632	mg/L	0.6	96.8	10	85 - 115	
QC Batch ID: BYD1829	Used client sample: Y - Description: MW-14-2, 04/20/2015 13:20										
Hexavalent Chromium	DUP	1509442-12	ND	ND		mg/L			10		
	MS	1509442-12	ND	0.052927	0.052632	mg/L		101		85 - 115	
	MSD	1509442-12	ND	0.052441	0.052632	mg/L	0.9	99.6	10	85 - 115	
QC Batch ID: BYD1915	Used client sample: Y - Description: MW-11-3, 04/20/2015 08:55										
Total Recoverable Arsenic	DUP	1509442-06	0.71800	0.82100		ug/L	13.4		20		J
	MS	1509442-06	0.71800	106.31	100.00	ug/L		106		70 - 130	
	MSD	1509442-06	0.71800	99.665	100.00	ug/L	6.5	98.9	20	70 - 130	
Total Recoverable Chromium	DUP	**1509442-06**	**1.1310**	**1.9950**		**ug/L**	**55.3**		**20**		**J,A02**
	MS	**1509442-06**	**1.1310**	**41.241**	**40.000**	**ug/L**		**100**		**70 - 130**	
	MSD	**1509442-06**	**1.1310**	**37.663**	**40.000**	**ug/L**	**9.1**	**91.3**	**20**	**70 - 130**	
Total Recoverable Lead	DUP	1509442-06	ND	ND		ug/L			20		
	MS	1509442-06	ND	106.26	100.00	ug/L		106		70 - 130	
	MSD	1509442-06	ND	97.056	100.00	ug/L	9.1	97.1	20	70 - 130	
QC Batch ID: BYD1916	Used client sample: Y - Description: MW-14-2, 04/20/2015 13:20										
Total Recoverable Arsenic	DUP	1509442-12	ND	ND		ug/L			20		
	MS	1509442-12	ND	98.140	100.00	ug/L		98.1		70 - 130	
	MSD	1509442-12	ND	105.46	100.00	ug/L	7.2	105	20	70 - 130	
Total Recoverable Chromium	DUP	1509442-12	0.66300	0.65800		ug/L	0.8		20		J
	MS	1509442-12	0.66300	33.029	40.000	ug/L		80.9		70 - 130	
	MSD	1509442-12	0.66300	35.643	40.000	ug/L	7.6	87.4	20	70 - 130	
Total Recoverable Lead	DUP	1509442-12	ND	ND		ug/L			20		
	MS	1509442-12	ND	90.147	100.00	ug/L		90.1		70 - 130	
	MSD	1509442-12	ND	96.162	100.00	ug/L	6.5	96.2	20	70 - 130	
QC Batch ID: BYD1954	Used client sample: Y - Description: MW-11-3, 04/20/2015 08:55										
Total Recoverable Iron	DUP	**1509442-06**	**48.777**	**60.629**		**ug/L**	**21.7**		**20**		**A02**
	MS	**1509442-06**	**48.777**	**1130.9**	**1000.0**	**ug/L**		**108**		**75 - 125**	
	MSD	**1509442-06**	**48.777**	**1077.4**	**1000.0**	**ug/L**	**4.8**	**103**	**20**	**75 - 125**	
QC Batch ID: BYD2066	Used client sample: Y - Description: MW-14-1, 04/20/2015 14:00										
Total Recoverable Iron	DUP	1509442-13	4582.5	4642.3		ug/L	1.3		20		
	MS	1509442-13	4582.5	5532.3	1000.0	ug/L		95.0		75 - 125	
	MSD	1509442-13	4582.5	5703.6	1000.0	ug/L	3.0	112	20	75 - 125	

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Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/07/2015 12:50 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A02	The difference between duplicate readings is less than the quantitation limit.
A03	The sample concentration is more than 4 times the spike level.
A07	Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

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Date of Report: 05/15/2015

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 2nd Qtr. 2015
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1509577
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 4/21/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.

Chain of Custody Form

*Required Fields

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Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:* (614) 792 - 2897 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-09577

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)
-1	TB-2-4/21/15	4-21-15	0620	AQ	X								
-2	EB-2-4/21/15		0640		X	X	X	X	X	X			
-3	MW-4-5		0720		X	X	X	X	X	X			
-4	MW-4-4		0800		X	X	X	X	X	X			
-5	DUP-2-2015		0810		X	X	X	X	X	X			
-6	MW-4-3		0840		X	X	X	X	X	X			
-7	MW-4-2		0910		X	X	X	X	X	X			
-8	MW-4-1		1010		X	X	X	X	X	X		X	X
-9	MW-24-5		1125		X	X	X	X	X	X			
-10	MW-24-4		1200		X	X	X	X	X	X			
-11	MW-24-3		1235		X	X	X	X	X	X			

Notes

all
SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT ☐

MS/MSD

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

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

Lab TAT Approval: _____ *Additional Charges May Apply

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By: [signature]	4-21-15	1600	1.Received By: Nicole	4/21/15	1600
2. Relinquished By: Nicole	4/21/15	1610	2.Received By: [signature]	4-21-15	1610
3. Relinquished By:	4-21-15	1915	3.Received By: [signature]	4-21-15	1915

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

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BC Laboratories, Inc.

Chain of Custody Form

*Required Fields

Page 2 of 2

Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:* (614) 792 - 2897 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-09577

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)		Notes
-12	MW-24-2	4-21-15	1310	AQ	X	X	X	X	X	X					
-13	MW-24-1	↓	1345	↓	X	X	X	X	X	X	X	X	X		

Analysis Requested

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

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

Lab TAT Approval: _____ *Additional Charges May Apply

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By: Cindy Wolff	4-21-15	1600	1.Received By: Nicole	4/21/15	1600
2. Relinquished By: Nicole	4/21/15	1610	2.Received By: [signature]	4-21-15	1610
3. Relinquished By: [signature]	4-21-15	1915	3.Received By: [signature]	4-21-15	1915

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 and Cooler Receipt Form for 1509577 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 4

Submission #: 15-09577

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: Voas Thermometer ID: 208 Date/Time 4-21-15 918
Temperature: (A) 1.8 °C / (C) 1.6 °C Analyst Init M

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10 11
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		ABC	ABC	ABC	ABC	ABC	ABC	ABC	ABC	A-F
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA ~~8015M~~ 8270								GH		
~~PT~~ AMBER PT 524								F		
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

omments:_____
ample Numbering Completed By: M Date/Time 4-21-15 1840 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
= Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1509577 Page 4 of 6

3C LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 2 Of 4

Submission #: 15-09577

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☑ None ☐ Box ☐	YES ☐ NO ☐
3C Lab Field Service ☒ Other ☐ (Specify)_____	Other ☐ (Specify)_____	

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: VOAs Thermometer ID: 208 Date/Time 4-21-15 1918

Temperature: (A) 1.8 °C / (C) 1.9 °C Analyst Init M

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
T GENERAL MINERAL/ GENERAL										
T PE UNPRESERVED										
T INORGANIC CHEMICAL METALS										
T INORGANIC CHEMICAL METALS										
T CYANIDE										
T NITROGEN FORMS										
T TOTAL SULFIDE										
z. NITRATE / NITRITE										
T TOTAL ORGANIC CARBON										
T TOX										
T CHEMICAL OXYGEN DEMAND										
A PHENOLICS										
ml VOA VIAL TRAVEL BLANK										
ml VOA VIAL	ABC	ABC	ABC							
T EPA 413.1, 413.2, 418.1										
T ODOR										
DIOLOGICAL										
CTERIOLOGICAL										
ml VOA VIAL- 504										
T EPA 508/608/8080										
T EPA 515.1/8150										
T EPA 525										
T EPA 525 TRAVEL BLANK										
nl EPA 547										
nl EPA 531.1										
Amber EPA 548										
T EPA 549										
T EPA 632										
T EPA 8015M										
T AMBER										
Z. JAR										
OZ. JAR										
IL SLEEVE										
B VIAL										
ASTIC BAG										
RROUS IRON										
CORE										
ART KIT										
nma Canister										

ments:_____

ple Numbering Completed By: M Date/Time: 4-21-15 1841 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]

Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1509577 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 3 Of 4

Submission #: 15-09577

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4-21-15 918

Temperature: (A) 1.0 °C / (C) 1.1 °C Analyst Init M

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL		D	D	D	D	D	D	D	D	D
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		E	E	E	E	E	E	E	E	E
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By: M Date/Time: 4/21/15 2030 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1509577 Page 6 of 6

BC LABORATORIES INC. **COOLER RECEIPT FORM** Rev. No. 18 09/04/14 Page 4 Of 4

Submission #: 15-09577

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4-21-15 1918
Temperature: (A) 1.0 °C / (C) 1.1 °C Analyst Init

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL	G	D	D							
PT PE UNPRESERVED			E							
QT INORGANIC CHEMICAL METALS			~~F~~							
PT INORGANIC CHEMICAL METALS	H	E	F							
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA ~~8015M~~ 8270			HI							
QT AMBER PT			G							
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By:_____ Date/Time: 4-21-15 2052 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509577-01	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 06:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-2-4/21/15	**Lab Matrix:**	Water
	Sampled By:	BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-2-4/21/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509577-02	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 06:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-2-4/21/15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-2-4/21/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509577-03	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 07:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-4-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509577-04	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 08:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-4-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509577-05	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 08:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-2-2Q15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-2-2Q15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509577-06	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 08:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-4-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509577-07	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 09:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-4-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509577-08	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 10:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-4-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509577-09	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 11:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-24-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509577-10	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 12:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-24-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-24-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509577-11	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 12:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-24-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-24-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509577-12	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 13:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-24-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509577-13	**COC Number:**	---	**Receive Date:**	04/21/2015 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/21/2015 13:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-24-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-24-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-01 | **Client Sample Name:** JPL-GW, TB-2-4/21/15, 4/21/2015 6:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-01 | **Client Sample Name:** JPL-GW, TB-2-4/21/15, 4/21/2015 6:20:00AM

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-01 | **Client Sample Name:** JPL-GW, TB-2-4/21/15, 4/21/2015 6:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.1	%	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	04/22/15	04/22/15 11:38	MGC	MS-V5	1	BYD1853

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-01 | **Client Sample Name:** JPL-GW, TB-2-4/21/15, 4/21/2015 6:20:00AM

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	04/22/15	04/22/15 11:38	MGC	MS-V5	1	BYD1853

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-02 | **Client Sample Name:** JPL-GW, EB-2-4/21/15, 4/21/2015 6:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-02 | **Client Sample Name:** JPL-GW, EB-2-4/21/15, 4/21/2015 6:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-02 | **Client Sample Name:** JPL-GW, EB-2-4/21/15, 4/21/2015 6:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.1	%	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	04/22/15	04/22/15 12:01	MGC	MS-V5	1	BYD1853

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-02 | **Client Sample Name:** JPL-GW, EB-2-4/21/15, 4/21/2015 6:40:00AM, 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	04/22/15	04/22/15 12:01	MGC	MS-V5	1	BYD1853

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-02 | **Client Sample Name:** JPL-GW, EB-2-4/21/15, 4/21/2015 6:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	**0.18**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND	**J**	1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.36**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND	**J**	3
Nitrate as N	**0.17**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**0.30**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND	**J**	3
pH	**4.93**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/15	04/24/15 18:16	JRG	PE-OP2	1	BYD2068
2	SM-2320B	04/23/15	04/23/15 18:27	RML	MET-1	1	BYD2118
3	EPA-300.0	04/22/15	04/22/15 05:13	OLH	IC5	1	BYD1868
4	EPA-150.1	04/23/15	04/23/15 18:27	RML	MET-1	1	BYD2118
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	0.667	BYD2210
6	EPA-353.2	04/22/15	04/22/15 08:47	TDC	KONE-1	1	BYD1935
7	EPA-314.0	04/29/15	04/29/15 16:41	BMW	IC6	1	BYD2604

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-02 | **Client Sample Name:** JPL-GW, EB-2-4/21/15, 4/21/2015 6:40:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	0.98		3
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 00:18	BMW	KONE-1	1	BYD2174
2	EPA-200.8	04/27/15	04/27/15 17:51	EAR	PE-EL2	1	BYD2281
3	EPA-200.8	04/29/15	04/29/15 23:46	EAR	PE-EL2	1	BYD2583
4	EPA-200.7	04/23/15	04/24/15 18:16	JRG	PE-OP2	1	BYD2068

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-03 | **Client Sample Name:** JPL-GW, MW-4-5, 4/21/2015 7:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-03 | **Client Sample Name:** JPL-GW, MW-4-5, 4/21/2015 7:20:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	**0.47**	**ug/L**	**0.50**	**0.098**	**EPA-524.2**	ND	**J**	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.49**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	**0.15**	**ug/L**	**0.50**	**0.093**	**EPA-524.2**	ND	**J**	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-03 | **Client Sample Name:** JPL-GW, MW-4-5, 4/21/2015 7:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.0	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/22/15	04/22/15 12:24	MGC	MS-V5	1	BYD1853

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-03 | **Client Sample Name:** JPL-GW, MW-4-5, 4/21/2015 7:20:00AM, 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	04/22/15	04/22/15 12:24	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-03 | **Client Sample Name:** JPL-GW, MW-4-5, 4/21/2015 7:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**56**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**29**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**38**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**97**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.82**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**390**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/15	04/24/15 18:32	JRG	PE-OP2	1	BYD2068
2	SM-2320B	04/23/15	04/23/15 18:37	RML	MET-1	1	BYD2118
3	EPA-300.0	04/22/15	04/22/15 05:30	OLH	IC5	1	BYD1868
4	EPA-150.1	04/23/15	04/23/15 18:37	RML	MET-1	1	BYD2118
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	2	BYD2210
6	EPA-353.2	04/22/15	04/22/15 08:47	TDC	KONE-1	1	BYD1935
7	EPA-314.0	04/29/15	04/29/15 16:55	BMW	IC6	1	BYD2604

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-03 | **Client Sample Name:** JPL-GW, MW-4-5, 4/21/2015 7:20:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	0.98		3
Total Recoverable Iron	**3000**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 00:18	BMW	KONE-1	1	BYD2174
2	EPA-200.8	04/27/15	04/27/15 17:54	EAR	PE-EL2	1	BYD2281
3	EPA-200.8	04/29/15	04/29/15 23:49	EAR	PE-EL2	1	BYD2583
4	EPA-200.7	04/23/15	04/24/15 18:32	JRG	PE-OP2	1	BYD2068

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-04 | **Client Sample Name:** JPL-GW, MW-4-4, 4/21/2015 8:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-04 | **Client Sample Name:** JPL-GW, MW-4-4, 4/21/2015 8:00:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	**0.59**	**ug/L**	**0.50**	**0.098**	**EPA-524.2**	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.57**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	**0.14**	**ug/L**	**0.50**	**0.093**	**EPA-524.2**	ND	**J**	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.30**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-04 | **Client Sample Name:** JPL-GW, MW-4-4, 4/21/2015 8:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/22/15	04/22/15 12:47	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-04 | **Client Sample Name:** JPL-GW, MW-4-4, 4/21/2015 8:00:00AM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/22/15	04/22/15 12:47	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-04 | **Client Sample Name:** JPL-GW, MW-4-4, 4/21/2015 8:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**71**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**33**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**39**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**110**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**36**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.97**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**450**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/15	04/24/15 18:42	JRG	PE-OP2	1	BYD2068
2	SM-2320B	04/23/15	04/23/15 18:45	RML	MET-1	1	BYD2118
3	EPA-300.0	04/22/15	04/22/15 05:48	OLH	IC5	1	BYD1868
4	EPA-150.1	04/23/15	04/23/15 18:45	RML	MET-1	1	BYD2118
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	3.333	BYD2210
6	EPA-353.2	04/22/15	04/22/15 08:47	TDC	KONE-1	1	BYD1935
7	EPA-314.0	04/29/15	04/29/15 17:09	BMW	IC6	1	BYD2604

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-04 | **Client Sample Name:** JPL-GW, MW-4-4, 4/21/2015 8:00:00AM, 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 Arsenic	**1.2**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.9**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.98	**J**	3
Total Recoverable Iron	**5900**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 00:18	BMW	KONE-1	1	BYD2174
2	EPA-200.8	04/27/15	04/27/15 17:58	EAR	PE-EL2	1	BYD2281
3	EPA-200.8	04/29/15	04/29/15 23:52	EAR	PE-EL2	1	BYD2583
4	EPA-200.7	04/23/15	04/24/15 18:42	JRG	PE-OP2	1	BYD2068

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-05 | **Client Sample Name:** JPL-GW, DUP-2-2Q15, 4/21/2015 8:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-05 | **Client Sample Name:** JPL-GW, DUP-2-2Q15, 4/21/2015 8:10:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	**0.51**	**ug/L**	**0.50**	**0.098**	**EPA-524.2**	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.55**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	**0.16**	**ug/L**	**0.50**	**0.093**	**EPA-524.2**	ND	**J**	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.28**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-05 | **Client Sample Name:** JPL-GW, DUP-2-2Q15, 4/21/2015 8:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.9	%	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	04/22/15	04/22/15 13:09	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-05 | **Client Sample Name:** JPL-GW, DUP-2-2Q15, 4/21/2015 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	04/22/15	04/22/15 13:09	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-05 | **Client Sample Name:** JPL-GW, DUP-2-2Q15, 4/21/2015 8:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**79**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**38**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**44**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**110**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**37**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.03**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**450**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/15	04/24/15 18:44	JRG	PE-OP2	1	BYD2068
2	SM-2320B	04/23/15	04/23/15 18:53	RML	MET-1	1	BYD2118
3	EPA-300.0	04/22/15	04/22/15 06:05	OLH	IC5	1	BYD1868
4	EPA-150.1	04/23/15	04/23/15 18:53	RML	MET-1	1	BYD2118
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	3.333	BYD2210
6	EPA-353.2	04/22/15	04/22/15 08:47	TDC	KONE-1	1	BYD1935
7	EPA-314.0	04/29/15	04/29/15 17:23	BMW	IC6	1	BYD2604

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-05 | **Client Sample Name:** JPL-GW, DUP-2-2Q15, 4/21/2015 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 Arsenic	**1.0**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.9**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.98	**J**	3
Total Recoverable Iron	**6900**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 00:18	BMW	KONE-1	1	BYD2174
2	EPA-200.8	04/27/15	04/27/15 18:01	EAR	PE-EL2	1	BYD2281
3	EPA-200.8	04/29/15	04/29/15 23:55	EAR	PE-EL2	1	BYD2583
4	EPA-200.7	04/23/15	04/24/15 18:44	JRG	PE-OP2	1	BYD2068

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-06 | **Client Sample Name:** JPL-GW, MW-4-3, 4/21/2015 8:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-06 | **Client Sample Name:** JPL-GW, MW-4-3, 4/21/2015 8:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	**0.48**	**ug/L**	**0.50**	**0.098**	**EPA-524.2**	ND	**J**	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.51**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.41**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-06 | **Client Sample Name:** JPL-GW, MW-4-3, 4/21/2015 8:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	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	04/22/15	04/22/15 13:32	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-06 | **Client Sample Name:** JPL-GW, MW-4-3, 4/21/2015 8:40:00AM, 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	04/22/15	04/22/15 13:32	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-06 | **Client Sample Name:** JPL-GW, MW-4-3, 4/21/2015 8:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**93**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**38**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**38**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**110**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**100**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.93**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**520**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/23/15	04/24/15 18:47	JRG	PE-OP2	1	BYD2068
2	SM-2320B	04/23/15	04/23/15 18:59	RML	MET-1	1	BYD2118
3	EPA-300.0	04/22/15	04/22/15 06:57	OLH	IC5	1	BYD1868
4	EPA-150.1	04/23/15	04/23/15 18:59	RML	MET-1	1	BYD2118
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	3.333	BYD2210
6	EPA-353.2	04/22/15	04/22/15 08:47	TDC	KONE-1	1	BYD1935
7	EPA-314.0	04/29/15	04/29/15 17:37	BMW	IC6	1	BYD2604

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-06 | **Client Sample Name:** JPL-GW, MW-4-3, 4/21/2015 8:40:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.5**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.98	**J**	3
Total Recoverable Iron	**2600**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 00:25	BMW	KONE-1	1	BYD2174
2	EPA-200.8	04/27/15	04/27/15 18:04	EAR	PE-EL2	1	BYD2281
3	EPA-200.8	04/29/15	04/29/15 22:47	EAR	PE-EL2	1	BYD2583
4	EPA-200.7	04/23/15	04/24/15 18:47	JRG	PE-OP2	1	BYD2068

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-07 | **Client Sample Name:** JPL-GW, MW-4-2, 4/21/2015 9:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.37**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-07 | **Client Sample Name:** JPL-GW, MW-4-2, 4/21/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.3**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-07 | **Client Sample Name:** JPL-GW, MW-4-2, 4/21/2015 9:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.9	%	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	04/22/15	04/22/15 13:55	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-07 | **Client Sample Name:** JPL-GW, MW-4-2, 4/21/2015 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	04/22/15	04/22/15 13:55	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-07 | **Client Sample Name:** JPL-GW, MW-4-2, 4/21/2015 9:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**140**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**54**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**39**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**280**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**230**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**120**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**12**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**180**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.63**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**760**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**7.2**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/27/15	04/28/15 16:34	JRG	PE-OP2	1	BYD2285
2	SM-2320B	04/23/15	04/23/15 19:06	RML	MET-1	2	BYD2118
3	EPA-300.0	04/22/15	04/22/15 07:15	OLH	IC5	1	BYD1868
4	EPA-150.1	04/23/15	04/23/15 19:06	RML	MET-1	1	BYD2118
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	5	BYD2210
6	EPA-353.2	04/22/15	04/22/15 08:47	TDC	KONE-1	1	BYD1935
7	EPA-314.0	04/29/15	04/29/15 17:51	BMW	IC6	1	BYD2604

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-07 | **Client Sample Name:** JPL-GW, MW-4-2, 4/21/2015 9:10:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**8.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.98		3
Total Recoverable Iron	**1000**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 00:25	BMW	KONE-1	1	BYD2174
2	EPA-200.8	04/27/15	04/27/15 18:07	EAR	PE-EL2	1	BYD2281
3	EPA-200.8	04/29/15	04/29/15 23:59	EAR	PE-EL2	1	BYD2583
4	EPA-200.7	04/27/15	04/28/15 16:34	JRG	PE-OP2	1	BYD2285

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-08 | **Client Sample Name:** JPL-GW, MW-4-1, 4/21/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-08 | **Client Sample Name:** JPL-GW, MW-4-1, 4/21/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-08 | **Client Sample Name:** JPL-GW, MW-4-1, 4/21/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.0	%	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	04/22/15	04/22/15 14:18	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-08 | **Client Sample Name:** JPL-GW, MW-4-1, 4/21/2015 10:10:00AM, 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	04/22/15	04/22/15 14:18	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

BCL Sample ID: 1509577-08 | **Client Sample Name:** JPL-GW, MW-4-1, 4/21/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,4-Dioxane	ND	ug/L	1.0	0.21	EPA-8270C	ND		1
Naphthalene-d8 (Surrogate)	86.0	%	75 - 132 (LCL - UCL)		EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	04/23/15	04/27/15 18:55	MK1	MS-B4	1	BYD2331

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-08 | **Client Sample Name:** JPL-GW, MW-4-1, 4/21/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**95**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**33**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**27**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**420**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**350**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**16**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**3.1**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**35**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.53**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**460**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/27/15	04/28/15 16:49	JRG	PE-OP2	1	BYD2285
2	SM-2320B	04/23/15	04/23/15 19:13	RML	MET-1	1	BYD2118
3	EPA-300.0	04/22/15	04/22/15 07:32	OLH	IC5	1	BYD1868
4	EPA-150.1	04/23/15	04/23/15 19:13	RML	MET-1	1	BYD2118
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	3.333	BYD2210
6	EPA-353.2	04/22/15	04/22/15 08:52	TDC	KONE-1	1	BYD1935
7	EPA-314.0	04/29/15	04/29/15 18:18	BMW	IC6	1	BYD2604

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-08 | **Client Sample Name:** JPL-GW, MW-4-1, 4/21/2015 10:10:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	0.98		3
Total Recoverable Iron	**280**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 00:25	BMW	KONE-1	1	BYD2174
2	EPA-200.8	04/27/15	04/27/15 18:10	EAR	PE-EL2	1	BYD2281
3	EPA-200.8	04/29/15	04/30/15 00:02	EAR	PE-EL2	1	BYD2583
4	EPA-200.7	04/27/15	04/28/15 16:49	JRG	PE-OP2	1	BYD2285

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-09 | **Client Sample Name:** JPL-GW, MW-24-5, 4/21/2015 11:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-09 | **Client Sample Name:** JPL-GW, MW-24-5, 4/21/2015 11:25:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-09 | **Client Sample Name:** JPL-GW, MW-24-5, 4/21/2015 11:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/22/15	04/22/15 14:40	MGC	MS-V5	1	BYD1853

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-09 | **Client Sample Name:** JPL-GW, MW-24-5, 4/21/2015 11:25:00AM, 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	04/22/15	04/22/15 14:40	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-09 | **Client Sample Name:** JPL-GW, MW-24-5, 4/21/2015 11:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**32**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**10**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**40**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**8.2**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.99**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**20**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.16**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**240**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/27/15	04/28/15 16:51	JRG	PE-OP2	1	BYD2285
2	SM-2320B	04/23/15	04/23/15 19:23	RML	MET-1	1	BYD2118
3	EPA-300.0	04/22/15	04/22/15 07:49	OLH	IC5	1	BYD1868
4	EPA-150.1	04/23/15	04/23/15 19:23	RML	MET-1	1	BYD2118
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	2	BYD2210
6	EPA-353.2	04/22/15	04/22/15 08:52	TDC	KONE-1	1	BYD1935
7	EPA-314.0	04/29/15	04/29/15 18:32	BMW	IC6	1	BYD2604

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-09 | **Client Sample Name:** JPL-GW, MW-24-5, 4/21/2015 11:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	**2.4**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**3.0**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.98		3
Total Recoverable Iron	**34**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 01:07	BMW	KONE-1	5	BYD2172
2	EPA-200.8	04/27/15	04/27/15 18:13	EAR	PE-EL2	1	BYD2281
3	EPA-200.8	04/29/15	04/30/15 00:05	EAR	PE-EL2	1	BYD2583
4	EPA-200.7	04/27/15	04/28/15 16:51	JRG	PE-OP2	1	BYD2285

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-10 | **Client Sample Name:** JPL-GW, MW-24-4, 4/21/2015 12:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-10 | **Client Sample Name:** JPL-GW, MW-24-4, 4/21/2015 12:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	**0.20**	**ug/L**	**0.50**	**0.098**	**EPA-524.2**	ND	**J**	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.34**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-10 | **Client Sample Name:** JPL-GW, MW-24-4, 4/21/2015 12:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.8	%	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	04/22/15	04/22/15 15:03	MGC	MS-V5	1	BYD1853

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-10 | **Client Sample Name:** JPL-GW, MW-24-4, 4/21/2015 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	04/22/15	04/22/15 15:03	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-10 | **Client Sample Name:** JPL-GW, MW-24-4, 4/21/2015 12:00:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**5.4**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**5.1**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**33**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**55**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**12**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**66**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**24**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.036**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**9.20**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**140**	**mg/L**	**10**	**10**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/27/15	04/28/15 16:54	JRG	PE-OP2	1	BYD2285
2	SM-2320B	04/23/15	04/23/15 19:30	RML	MET-1	1	BYD2118
3	EPA-300.0	04/22/15	04/22/15 08:07	OLH	IC5	1	BYD1868
4	EPA-150.1	04/23/15	04/23/15 19:30	RML	MET-1	1	BYD2118
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	1	BYD2210
6	EPA-353.2	04/22/15	04/22/15 08:52	TDC	KONE-1	1	BYD1935
7	EPA-314.0	04/29/15	04/29/15 18:46	BMW	IC6	1	BYD2604

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-10 | **Client Sample Name:** JPL-GW, MW-24-4, 4/21/2015 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 Arsenic	**0.99**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.97**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.98	**J**	3
Total Recoverable Iron	**40**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 00:25	BMW	KONE-1	1	BYD2174
2	EPA-200.8	04/27/15	04/27/15 18:17	EAR	PE-EL2	1	BYD2281
3	EPA-200.8	04/29/15	04/30/15 00:08	EAR	PE-EL2	1	BYD2583
4	EPA-200.7	04/27/15	04/28/15 16:54	JRG	PE-OP2	1	BYD2285

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-11 | **Client Sample Name:** JPL-GW, MW-24-3, 4/21/2015 12:35:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-11 | **Client Sample Name:** JPL-GW, MW-24-3, 4/21/2015 12:35:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.10**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-11 | **Client Sample Name:** JPL-GW, MW-24-3, 4/21/2015 12:35:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	92.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/22/15	04/22/15 08:59	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-11 | **Client Sample Name:** JPL-GW, MW-24-3, 4/21/2015 12:35:00PM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/22/15	04/22/15 08:59	MGC	MS-V5	1	BYD1853

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-11 | **Client Sample Name:** JPL-GW, MW-24-3, 4/21/2015 12:35:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**19**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**11**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**45**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**160**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**3.1**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**140**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**23**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.074**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**4.6**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.36**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**230**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/27/15	04/28/15 16:18	JRG	PE-OP2	1	BYD2285
2	SM-2320B	04/23/15	04/23/15 19:36	RML	MET-1	1	BYD2118
3	EPA-300.0	04/22/15	04/22/15 04:03	OLH	IC5	1	BYD1868
4	EPA-150.1	04/23/15	04/23/15 19:36	RML	MET-1	1	BYD2118
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	2	BYD2210
6	EPA-353.2	04/22/15	04/22/15 08:47	TDC	KONE-1	1	BYD1935
7	EPA-314.0	04/29/15	04/30/15 09:43	BMW	IC6	1	BYD2605

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-11 | **Client Sample Name:** JPL-GW, MW-24-3, 4/21/2015 12:35:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	**1.6**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.98	**J**	3
Total Recoverable Iron	**33**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 01:00	BMW	KONE-1	5	BYD2172
2	EPA-200.8	04/27/15	04/27/15 17:12	EAR	PE-EL2	1	BYD2281
3	EPA-200.8	04/29/15	04/30/15 00:11	EAR	PE-EL2	1	BYD2583
4	EPA-200.7	04/27/15	04/28/15 16:18	JRG	PE-OP2	1	BYD2285

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-12 | **Client Sample Name:** JPL-GW, MW-24-2, 4/21/2015 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**0.49**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.70**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	**0.080**	**ug/L**	**0.50**	**0.072**	**EPA-524.2**	ND	**J**	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.15**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-12 | **Client Sample Name:** JPL-GW, MW-24-2, 4/21/2015 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.21**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-12 | **Client Sample Name:** JPL-GW, MW-24-2, 4/21/2015 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.6	%	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	04/22/15	04/22/15 15:26	MGC	MS-V5	1	BYD1853

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-12 | **Client Sample Name:** JPL-GW, MW-24-2, 4/21/2015 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	04/22/15	04/22/15 15:26	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-12 | **Client Sample Name:** JPL-GW, MW-24-2, 4/21/2015 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**49**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**17**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**45**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**51**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.8**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**26**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.98**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**340**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**4.1**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/27/15	04/28/15 16:57	JRG	PE-OP2	1	BYD2285
2	SM-2320B	04/23/15	04/23/15 20:01	RML	MET-1	1	BYD2119
3	EPA-300.0	04/22/15	04/22/15 08:59	OLH	IC5	1	BYD1869
4	EPA-150.1	04/23/15	04/23/15 20:01	RML	MET-1	1	BYD2119
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	2	BYD2209
6	EPA-353.2	04/22/15	04/22/15 08:57	TDC	KONE-1	1	BYD1934
7	EPA-314.0	04/29/15	04/30/15 09:15	BMW	IC6	1	BYD2604

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-12 | **Client Sample Name:** JPL-GW, MW-24-2, 4/21/2015 1:10:00PM, 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 Arsenic	**1.7**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.89	**J**	3
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 00:25	BMW	KONE-1	1	BYD2174
2	EPA-200.8	04/27/15	04/27/15 21:24	SRM	PE-EL2	1	BYD2282
3	EPA-200.8	04/30/15	04/30/15 15:54	SRM	PE-EL2	1	BYD2641
4	EPA-200.7	04/27/15	04/28/15 16:57	JRG	PE-OP2	1	BYD2285

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-13 | **Client Sample Name:** JPL-GW, MW-24-1, 4/21/2015 1:45:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**2.3**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-13 | **Client Sample Name:** JPL-GW, MW-24-1, 4/21/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509577-13 | **Client Sample Name:** JPL-GW, MW-24-1, 4/21/2015 1:45:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	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	04/22/15	04/22/15 15:49	MGC	MS-V5	1	BYD1853

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509577-13 | **Client Sample Name:** JPL-GW, MW-24-1, 4/21/2015 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	04/22/15	04/22/15 15:49	MGC	MS-V5	1	BYD1853

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

BCL Sample ID: 1509577-13 | **Client Sample Name:** JPL-GW, MW-24-1, 4/21/2015 1:45:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,4-Dioxane	ND	ug/L	1.0	0.21	EPA-8270C	ND		1
Naphthalene-d8 (Surrogate)	84.0	%	75 - 132 (LCL - UCL)		EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	04/23/15	04/27/15 19:16	MK1	MS-B4	1	BYD2331

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509577-13 | **Client Sample Name:** JPL-GW, MW-24-1, 4/21/2015 1:45:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**69**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**24**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**39**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**87**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.4**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**48**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.68**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**450**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**66**	**ug/L**	**20**	**6.5**	**EPA-314.0**	ND	**A07**	7
ortho-Phosphate as P	ND	mg/L	0.020	0.0057	EPA-365.1	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/27/15	04/28/15 16:59	JRG	PE-OP2	1	BYD2285
2	SM-2320B	04/23/15	04/23/15 20:16	RML	MET-1	1	BYD2119
3	EPA-300.0	04/22/15	04/22/15 10:43	OLH	IC5	1	BYD1869
4	EPA-150.1	04/23/15	04/23/15 20:16	RML	MET-1	1	BYD2119
5	EPA-160.1	04/24/15	04/24/15 13:00	CAD	MANUAL	3.333	BYD2209
6	EPA-353.2	04/22/15	04/22/15 08:41	TDC	KONE-1	1	BYD1934
7	EPA-314.0	04/29/15	04/30/15 09:57	BMW	IC6	5	BYD2605
8	EPA-365.1	04/22/15	04/22/15 08:10	TDC	KONE-1	1	BYD2177

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509577-13 | **Client Sample Name:** JPL-GW, MW-24-1, 4/21/2015 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**10**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.89		3
Total Recoverable Iron	**1600**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/22/15	04/22/15 00:28	BMW	KONE-1	1	BYD2174
2	EPA-200.8	04/27/15	04/27/15 21:27	SRM	PE-EL2	1	BYD2282
3	EPA-200.8	04/30/15	04/30/15 15:57	SRM	PE-EL2	1	BYD2641
4	EPA-200.7	04/27/15	04/28/15 16:59	JRG	PE-OP2	1	BYD2285

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1853						
Benzene	BYD1853-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYD1853-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYD1853-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYD1853-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYD1853-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYD1853-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYD1853-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYD1853-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYD1853-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYD1853-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYD1853-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYD1853-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYD1853-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYD1853-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYD1853-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYD1853-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYD1853-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYD1853-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYD1853-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYD1853-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYD1853-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYD1853-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYD1853-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYD1853-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYD1853-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYD1853-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYD1853-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYD1853-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYD1853-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYD1853-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYD1853-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYD1853-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYD1853-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYD1853-BLK1	ND	ug/L	0.50	0.14	

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1853						
trans-1,3-Dichloropropene	BYD1853-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYD1853-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYD1853-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYD1853-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYD1853-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYD1853-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BYD1853-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYD1853-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYD1853-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYD1853-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYD1853-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYD1853-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYD1853-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYD1853-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYD1853-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYD1853-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYD1853-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYD1853-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYD1853-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYD1853-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYD1853-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYD1853-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYD1853-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYD1853-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYD1853-BLK1	ND	ug/L	0.50	0.12	
Acetone	BYD1853-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BYD1853-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BYD1853-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BYD1853-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BYD1853-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BYD1853-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BYD1853-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BYD1853-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BYD1853-BLK1	ND	ug/L	4.0	0.97	

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1853						
Ethyl t-butyl ether	BYD1853-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BYD1853-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BYD1853-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BYD1853-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BYD1853-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BYD1853-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BYD1853-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BYD1853-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BYD1853-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BYD1853-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BYD1853-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BYD1853-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYD1853-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYD1853-BLK1**	**98.0**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYD1853-BLK1**	**99.9**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYD1853-BLK1**	**97.0**	%	**80 - 120 (LCL - UCL)**		

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD1853										
Benzene	BYD1853-BS1	LCS	22.220	25.000	ug/L	88.9		70 - 130		
Bromodichloromethane	BYD1853-BS1	LCS	21.940	25.000	ug/L	87.8		70 - 130		
Chlorobenzene	BYD1853-BS1	LCS	22.410	25.000	ug/L	89.6		70 - 130		
Chloroethane	BYD1853-BS1	LCS	22.270	25.000	ug/L	89.1		70 - 130		
1,4-Dichlorobenzene	BYD1853-BS1	LCS	21.610	25.000	ug/L	86.4		70 - 130		
1,1-Dichloroethane	BYD1853-BS1	LCS	21.770	25.000	ug/L	87.1		70 - 130		
1,1-Dichloroethene	BYD1853-BS1	LCS	23.290	25.000	ug/L	93.2		70 - 130		
Toluene	BYD1853-BS1	LCS	22.020	25.000	ug/L	88.1		70 - 130		
Trichloroethene	BYD1853-BS1	LCS	22.670	25.000	ug/L	90.7		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYD1853-BS1	LCS	9.2200	10.000	ug/L	92.2		75 - 125		
Toluene-d8 (Surrogate)	BYD1853-BS1	LCS	9.7600	10.000	ug/L	97.6		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYD1853-BS1	LCS	9.6900	10.000	ug/L	96.9		80 - 120		

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Reported: 05/15/2015 10:25
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Project Number: 2nd Qtr. 2015
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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD1853	Used client sample: Y - Description: MW-24-3, 04/21/2015 12:35										
Benzene	MS	1509577-11	ND	20.380	25.000	ug/L		81.5		70 - 130	
	MSD	1509577-11	ND	18.990	25.000	ug/L	7.1	76.0	20	70 - 130	
Bromodichloromethane	MS	1509577-11	ND	20.660	25.000	ug/L		82.6		70 - 130	
	MSD	1509577-11	ND	19.880	25.000	ug/L	3.8	79.5	20	70 - 130	
Chlorobenzene	MS	1509577-11	ND	20.740	25.000	ug/L		83.0		70 - 130	
	MSD	1509577-11	ND	20.450	25.000	ug/L	1.4	81.8	20	70 - 130	
Chloroethane	MS	1509577-11	ND	20.330	25.000	ug/L		81.3		70 - 130	
	MSD	1509577-11	ND	19.540	25.000	ug/L	4.0	78.2	20	70 - 130	
1,4-Dichlorobenzene	MS	1509577-11	ND	20.180	25.000	ug/L		80.7		70 - 130	
	MSD	1509577-11	ND	19.870	25.000	ug/L	1.5	79.5	20	70 - 130	
1,1-Dichloroethane	MS	1509577-11	ND	20.240	25.000	ug/L		81.0		70 - 130	
	MSD	1509577-11	ND	18.820	25.000	ug/L	7.3	75.3	20	70 - 130	
1,1-Dichloroethene	MS	1509577-11	ND	21.360	25.000	ug/L		85.4		70 - 130	
	MSD	1509577-11	ND	19.910	25.000	ug/L	7.0	79.6	20	70 - 130	
Toluene	MS	1509577-11	ND	20.640	25.000	ug/L		82.6		70 - 130	
	MSD	1509577-11	ND	19.390	25.000	ug/L	6.2	77.6	20	70 - 130	
Trichloroethene	MS	1509577-11	ND	21.760	25.000	ug/L		87.0		70 - 130	
	MSD	1509577-11	ND	19.850	25.000	ug/L	9.2	79.4	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1509577-11	ND	9.3400	10.000	ug/L		93.4		75 - 125	
	MSD	1509577-11	ND	9.4500	10.000	ug/L	1.2	94.5		75 - 125	
Toluene-d8 (Surrogate)	MS	1509577-11	ND	9.9500	10.000	ug/L		99.5		80 - 120	
	MSD	1509577-11	ND	9.9500	10.000	ug/L	0	99.5		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1509577-11	ND	9.4900	10.000	ug/L		94.9		80 - 120	
	MSD	1509577-11	ND	10.070	10.000	ug/L	5.9	101		80 - 120	

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1853						
Chloroacetonitrile	BYD1853-BLK1	0	ug/L			
1-Chlorobutane	BYD1853-BLK1	0	ug/L			
1,1-Dichloropropanone	BYD1853-BLK1	0	ug/L			
Methyl acrylate	BYD1853-BLK1	0	ug/L			
Nitrobenzene	BYD1853-BLK1	0	ug/L			
2-Nitropropane	BYD1853-BLK1	0	ug/L			

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Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/15/2015 10:25 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYD2331						
1,4-Dioxane	BYD2331-BLK1	ND	ug/L	1.0	0.21	
Naphthalene-d8 (Surrogate)	**BYD2331-BLK1**	**85.0**	%	**75 - 132 (LCL - UCL)**		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2331										
1,4-Dioxane	BYD2331-BS1	LCS	43.883	50.000	ug/L	87.8		70 - 130		
Naphthalene-d8 (Surrogate)	BYD2331-BS1	LCS	31.244	40.000	ug/L	78.1		75 - 132		

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2331	Used client sample: N										
1,4-Dioxane	MS	1506890-74	ND	42.554	50.000	ug/L		85.1		70 - 130	
	MSD	1506890-74	ND	40.954	50.000	ug/L	3.8	81.9	30	70 - 130	
Naphthalene-d8 (Surrogate)	MS	**1506890-74**	**ND**	**29.498**	**40.000**	**ug/L**		**73.7**		**75 - 132**	**S09**
	MSD	**1506890-74**	**ND**	**30.370**	**40.000**	**ug/L**	**2.9**	**75.9**		**75 - 132**	

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1868						
Chloride	BYD1868-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD1868-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD1868-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD1869						
Chloride	BYD1869-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD1869-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD1869-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD1934						
Nitrite as N	BYD1934-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD1935						
Nitrite as N	BYD1935-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD2068						
Total Recoverable Calcium	BYD2068-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	BYD2068-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	BYD2068-BLK1	ND	mg/L	0.50	0.017	
Total Recoverable Potassium	BYD2068-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD2118						
Bicarbonate	BYD2118-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2118-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2118-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2119						
Bicarbonate	BYD2119-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2119-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2119-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2177						
ortho-Phosphate as P	BYD2177-BLK1	ND	mg/L	0.020	0.0057	
QC Batch ID: BYD2209						
Total Dissolved Solids @ 180 C	BYD2209-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYD2210						
Total Dissolved Solids @ 180 C	BYD2210-BLK1	ND	mg/L	6.7	6.7	

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Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2285						
Total Recoverable Calcium	BYD2285-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	BYD2285-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	BYD2285-BLK1	ND	mg/L	0.50	0.017	
Total Recoverable Potassium	BYD2285-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD2604						
Perchlorate	BYD2604-BLK1	ND	ug/L	4.0	1.3	
QC Batch ID: BYD2605						
Perchlorate	BYD2605-BLK1	ND	ug/L	4.0	1.3	

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD1868										
Chloride	BYD1868-BS1	LCS	51.581	50.000	mg/L	103		90 - 110		
Nitrate as N	BYD1868-BS1	LCS	5.1420	5.0000	mg/L	103		90 - 110		
Sulfate	BYD1868-BS1	LCS	102.23	100.00	mg/L	102		90 - 110		
QC Batch ID: BYD1869										
Chloride	BYD1869-BS1	LCS	51.789	50.000	mg/L	104		90 - 110		
Nitrate as N	BYD1869-BS1	LCS	5.1650	5.0000	mg/L	103		90 - 110		
Sulfate	BYD1869-BS1	LCS	102.84	100.00	mg/L	103		90 - 110		
QC Batch ID: BYD1934										
Nitrite as N	BYD1934-BS1	LCS	0.50734	0.50000	mg/L	101		90 - 110		
QC Batch ID: BYD1935										
Nitrite as N	BYD1935-BS1	LCS	0.50321	0.50000	mg/L	101		90 - 110		
QC Batch ID: BYD2068										
Total Recoverable Calcium	BYD2068-BS1	LCS	10.230	10.000	mg/L	102		85 - 115		
Total Recoverable Magnesium	BYD2068-BS1	LCS	10.706	10.000	mg/L	107		85 - 115		
Total Recoverable Sodium	BYD2068-BS1	LCS	10.338	10.000	mg/L	103		85 - 115		
Total Recoverable Potassium	BYD2068-BS1	LCS	9.9804	10.000	mg/L	99.8		85 - 115		
QC Batch ID: BYD2118										
Total Alkalinity as CaCO3	BYD2118-BS3	LCS	100.71	100.00	mg/L	101		90 - 110		
pH	BYD2118-BS2	LCS	7.0400	7.0000	pH Units	101		95 - 105		
QC Batch ID: BYD2119										
Total Alkalinity as CaCO3	BYD2119-BS3	LCS	101.17	100.00	mg/L	101		90 - 110		
pH	BYD2119-BS2	LCS	7.0400	7.0000	pH Units	101		95 - 105		
QC Batch ID: BYD2177										
ortho-Phosphate as P	BYD2177-BS1	LCS	0.19317	0.20000	mg/L	96.6		90 - 110		
QC Batch ID: BYD2209										
Total Dissolved Solids @ 180 C	BYD2209-BS1	LCS	535.00	586.00	mg/L	91.3		90 - 110		
QC Batch ID: BYD2210										
Total Dissolved Solids @ 180 C	BYD2210-BS1	LCS	575.00	586.00	mg/L	98.1		90 - 110		
QC Batch ID: BYD2285										
Total Recoverable Calcium	BYD2285-BS1	LCS	10.113	10.000	mg/L	101		85 - 115		
Total Recoverable Magnesium	BYD2285-BS1	LCS	11.055	10.000	mg/L	111		85 - 115		
Total Recoverable Sodium	BYD2285-BS1	LCS	10.146	10.000	mg/L	101		85 - 115		

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2285										
Total Recoverable Potassium	BYD2285-BS1	LCS	9.9019	10.000	mg/L	99.0		85 - 115		
QC Batch ID: BYD2604										
Perchlorate	BYD2604-BS1	LCS	11.342	10.000	ug/L	113		85 - 115		
QC Batch ID: BYD2605										
Perchlorate	BYD2605-BS1	LCS	10.219	10.000	ug/L	102		85 - 115		

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD1868	Used client sample: Y - Description: MW-24-3, 04/21/2015 12:35										
Chloride	DUP	1509577-11	23.486	23.794		mg/L	1.3		10		
	MS	1509577-11	23.486	78.084	50.505	mg/L		108		80 - 120	
	MSD	1509577-11	23.486	78.027	50.505	mg/L	0.1	108	10	80 - 120	
Nitrate as N	DUP	**1509577-11**	**0.074000**	**0.10900**		**mg/L**	**38.3**		**10**		**A02**
	MS	**1509577-11**	**0.074000**	**5.1889**	**5.0505**	**mg/L**		**101**		**80 - 120**	
	MSD	**1509577-11**	**0.074000**	**5.2040**	**5.0505**	**mg/L**	**0.3**	**102**	**10**	**80 - 120**	
Sulfate	DUP	**1509577-11**	**4.5890**	**5.3040**		**mg/L**	**14.5**		**10**		**A02**
	MS	**1509577-11**	**4.5890**	**107.81**	**101.01**	**mg/L**		**102**		**80 - 120**	
	MSD	**1509577-11**	**4.5890**	**107.73**	**101.01**	**mg/L**	**0.1**	**102**	**10**	**80 - 120**	
QC Batch ID: BYD1869	Used client sample: Y - Description: MW-24-2, 04/21/2015 13:10										
Chloride	DUP	1509577-12	50.663	50.606		mg/L	0.1		10		
	MS	1509577-12	50.663	104.41	50.505	mg/L		106		80 - 120	
	MSD	1509577-12	50.663	103.96	50.505	mg/L	0.4	106	10	80 - 120	
Nitrate as N	DUP	1509577-12	1.7850	1.7760		mg/L	0.5		10		
	MS	1509577-12	1.7850	7.0051	5.0505	mg/L		103		80 - 120	
	MSD	1509577-12	1.7850	6.9636	5.0505	mg/L	0.6	103	10	80 - 120	
Sulfate	DUP	1509577-12	26.228	26.213		mg/L	0.1		10		
	MS	1509577-12	26.228	134.15	101.01	mg/L		107		80 - 120	
	MSD	1509577-12	26.228	133.58	101.01	mg/L	0.4	106	10	80 - 120	
QC Batch ID: BYD1934	Used client sample: Y - Description: MW-24-1, 04/21/2015 13:45										
Nitrite as N	DUP	1509577-13	ND	ND		mg/L			10		
	MS	1509577-13	ND	0.52016	0.52632	mg/L		98.8		90 - 110	
	MSD	1509577-13	ND	0.52033	0.52632	mg/L	0.0	98.9	10	90 - 110	
QC Batch ID: BYD1935	Used client sample: Y - Description: MW-24-3, 04/21/2015 12:35										
Nitrite as N	DUP	1509577-11	ND	ND		mg/L			10		
	MS	1509577-11	ND	0.52060	0.52632	mg/L		98.9		90 - 110	
	MSD	1509577-11	ND	0.52270	0.52632	mg/L	0.4	99.3	10	90 - 110	
QC Batch ID: BYD2068	Used client sample: Y - Description: EB-2-4/21/15, 04/21/2015 06:40										
Total Recoverable Calcium	DUP	1509577-02	ND	ND		mg/L			20		
	MS	1509577-02	ND	10.135	10.000	mg/L		101		75 - 125	
	MSD	1509577-02	ND	10.504	10.000	mg/L	3.6	105	20	75 - 125	
Total Recoverable Magnesium	DUP	1509577-02	ND	ND		mg/L			20		
	MS	1509577-02	ND	10.585	10.000	mg/L		106		75 - 125	
	MSD	1509577-02	ND	11.039	10.000	mg/L	4.2	110	20	75 - 125	
Total Recoverable Sodium	DUP	**1509577-02**	**0.17710**	**0.13490**		**mg/L**	**27.0**		**20**		**J,A02**
	MS	**1509577-02**	**0.17710**	**10.320**	**10.000**	**mg/L**		**101**		**75 - 125**	
	MSD	**1509577-02**	**0.17710**	**10.667**	**10.000**	**mg/L**	**3.3**	**105**	**20**	**75 - 125**	

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2068	Used client sample: Y - Description: EB-2-4/21/15, 04/21/2015 06:40										
Total Recoverable Potassium	DUP	1509577-02	ND	ND		mg/L			20		
	MS	1509577-02	ND	9.8314	10.000	mg/L		98.3		75 - 125	
	MSD	1509577-02	ND	10.135	10.000	mg/L	3.0	101	20	75 - 125	
QC Batch ID: BYD2118	Used client sample: Y - Description: EB-2-4/21/15, 04/21/2015 06:40										
Bicarbonate	DUP	1509577-02	ND	ND		mg/L			10		
Carbonate	DUP	1509577-02	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1509577-02	ND	ND		mg/L			10		
pH	DUP	1509577-02	4.9300	4.8800		pH Units	1.0		20		
QC Batch ID: BYD2119	Used client sample: Y - Description: MW-24-2, 04/21/2015 13:10										
Bicarbonate	DUP	1509577-12	205.90	201.82		mg/L	2.0		10		
Carbonate	DUP	1509577-12	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1509577-12	168.87	165.52		mg/L	2.0		10		
pH	DUP	1509577-12	7.9800	7.9900		pH Units	0.1		20		
QC Batch ID: BYD2177	Used client sample: Y - Description: MW-24-1, 04/21/2015 13:45										
ortho-Phosphate as P	DUP	1509577-13	ND	ND		mg/L			10		
	MS	1509577-13	ND	0.19979	0.21053	mg/L		94.9		90 - 110	
	MSD	1509577-13	ND	0.20075	0.21053	mg/L	0.5	95.4	10	90 - 110	
QC Batch ID: BYD2209	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1509564-01	513.33	516.66		mg/L	0.6		10		
QC Batch ID: BYD2210	Used client sample: Y - Description: MW-24-3, 04/21/2015 12:35										
Total Dissolved Solids @ 180 C	DUP	1509577-11	234.00	232.00		mg/L	0.9		10		
QC Batch ID: BYD2285	Used client sample: Y - Description: MW-24-3, 04/21/2015 12:35										
Total Recoverable Calcium	DUP	1509577-11	19.475	18.752		mg/L	3.8		20		
	MS	1509577-11	19.475	28.897	10.000	mg/L		94.2		75 - 125	
	MSD	1509577-11	19.475	28.891	10.000	mg/L	0.0	94.2	20	75 - 125	
Total Recoverable Magnesium	DUP	1509577-11	11.183	10.814		mg/L	3.4		20		
	MS	1509577-11	11.183	21.861	10.000	mg/L		107		75 - 125	
	MSD	1509577-11	11.183	21.412	10.000	mg/L	2.1	102	20	75 - 125	
Total Recoverable Sodium	DUP	1509577-11	45.111	43.425		mg/L	3.8		20		
	MS	1509577-11	45.111	53.852	10.000	mg/L		87.4		75 - 125	
	MSD	1509577-11	45.111	53.789	10.000	mg/L	0.1	86.8	20	75 - 125	
Total Recoverable Potassium	DUP	1509577-11	1.9654	1.9457		mg/L	1.0		20		
	MS	1509577-11	1.9654	12.211	10.000	mg/L		102		75 - 125	
	MSD	1509577-11	1.9654	11.882	10.000	mg/L	2.7	99.2	20	75 - 125	
QC Batch ID: BYD2604	Used client sample: Y - Description: EB-2-4/21/15, 04/21/2015 06:40										

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2604	Used client sample: Y - Description: EB-2-4/21/15, 04/21/2015 06:40										
Perchlorate	DUP	1509577-02	ND	ND		ug/L			15		
	MS	1509577-02	ND	21.162	20.202	ug/L		105		80 - 120	
	MSD	1509577-02	ND	21.894	20.202	ug/L	3.4	108	15	80 - 120	
QC Batch ID: BYD2605	Used client sample: Y - Description: MW-24-3, 04/21/2015 12:35										
Perchlorate	DUP	1509577-11	ND	ND		ug/L			15		
	MS	1509577-11	ND	21.223	20.202	ug/L		105		80 - 120	
	MSD	1509577-11	ND	22.263	20.202	ug/L	4.8	110	15	80 - 120	

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Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2068						
Total Recoverable Iron	BYD2068-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BYD2172						
Hexavalent Chromium	BYD2172-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYD2174						
Hexavalent Chromium	BYD2174-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYD2281						
Total Recoverable Arsenic	BYD2281-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Lead	BYD2281-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYD2282						
Total Recoverable Arsenic	BYD2282-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Lead	BYD2282-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYD2285						
Total Recoverable Iron	BYD2285-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BYD2583						
Total Recoverable Chromium	**BYD2583-BLK1**	**0.98300**	**ug/L**	**3.0**	**0.50**	**J**
QC Batch ID: BYD2641						
Total Recoverable Chromium	**BYD2641-BLK1**	**0.88800**	**ug/L**	**3.0**	**0.50**	**J**

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2068										
Total Recoverable Iron	BYD2068-BS1	LCS	1068.1	1000.0	ug/L	107		85 - 115		
QC Batch ID: BYD2172										
Hexavalent Chromium	BYD2172-BS1	LCS	0.049870	0.050000	mg/L	99.7		85 - 115		
QC Batch ID: BYD2174										
Hexavalent Chromium	BYD2174-BS1	LCS	0.050198	0.050000	mg/L	100		85 - 115		
QC Batch ID: BYD2281										
Total Recoverable Arsenic	BYD2281-BS1	LCS	107.62	100.00	ug/L	108		85 - 115		
Total Recoverable Lead	BYD2281-BS1	LCS	110.45	100.00	ug/L	110		85 - 115		
QC Batch ID: BYD2282										
Total Recoverable Arsenic	BYD2282-BS1	LCS	106.32	100.00	ug/L	106		85 - 115		
Total Recoverable Lead	BYD2282-BS1	LCS	110.61	100.00	ug/L	111		85 - 115		
QC Batch ID: BYD2285										
Total Recoverable Iron	BYD2285-BS1	LCS	1013.5	1000.0	ug/L	101		85 - 115		
QC Batch ID: BYD2583										
Total Recoverable Chromium	BYD2583-BS1	LCS	43.119	40.000	ug/L	108		85 - 115		
QC Batch ID: BYD2641										
Total Recoverable Chromium	BYD2641-BS1	LCS	41.645	40.000	ug/L	104		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 10:25
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2068	Used client sample: Y - Description: EB-2-4/21/15, 04/21/2015 06:40										
Total Recoverable Iron	DUP	1509577-02	ND	ND		ug/L			20		
	MS	1509577-02	ND	1066.5	1000.0	ug/L		107		75 - 125	
	MSD	1509577-02	ND	1088.2	1000.0	ug/L	2.0	109	20	75 - 125	
QC Batch ID: BYD2172	Used client sample: Y - Description: MW-24-3, 04/21/2015 12:35										
Hexavalent Chromium	DUP	**1509577-11**	**ND**	**ND**		**mg/L**			**10**		
	MS	**1509577-11**	**ND**	**0.22056**	**0.26316**	**mg/L**		**83.8**		**85 - 115**	**Q03**
	MSD	**1509577-11**	**ND**	**0.21918**	**0.26316**	**mg/L**	**0.6**	**83.3**	**10**	**85 - 115**	**Q03**
QC Batch ID: BYD2174	Used client sample: Y - Description: MW-24-2, 04/21/2015 13:10										
Hexavalent Chromium	DUP	1509577-12	0.0013850	0.0014770		mg/L	6.4		10		J
	MS	1509577-12	0.0013850	0.053883	0.052632	mg/L		99.7		85 - 115	
	MSD	1509577-12	0.0013850	0.053715	0.052632	mg/L	0.3	99.4	10	85 - 115	
QC Batch ID: BYD2281	Used client sample: Y - Description: MW-24-3, 04/21/2015 12:35										
Total Recoverable Arsenic	DUP	1509577-11	1.6330	1.8360		ug/L	11.7		20		J
	MS	1509577-11	1.6330	105.83	100.00	ug/L		104		70 - 130	
	MSD	1509577-11	1.6330	106.08	100.00	ug/L	0.2	104	20	70 - 130	
Total Recoverable Lead	DUP	1509577-11	ND	ND		ug/L			20		
	MS	1509577-11	ND	101.56	100.00	ug/L		102		70 - 130	
	MSD	1509577-11	ND	106.71	100.00	ug/L	4.9	107	20	70 - 130	
QC Batch ID: BYD2282	Used client sample: N										
Total Recoverable Arsenic	DUP	1509731-02	5.7860	5.4660		ug/L	5.7		20		
	MS	1509731-02	5.7860	118.14	100.00	ug/L		112		70 - 130	
	MSD	1509731-02	5.7860	110.99	100.00	ug/L	6.2	105	20	70 - 130	
Total Recoverable Lead	DUP	1509731-02	0.27200	0.24200		ug/L	11.7		20		J
	MS	1509731-02	0.27200	99.711	100.00	ug/L		99.4		70 - 130	
	MSD	1509731-02	0.27200	94.925	100.00	ug/L	4.9	94.7	20	70 - 130	
QC Batch ID: BYD2285	Used client sample: Y - Description: MW-24-3, 04/21/2015 12:35										
Total Recoverable Iron	DUP	1509577-11	32.734	ND		ug/L			20		
	MS	1509577-11	32.734	1048.1	1000.0	ug/L		102		75 - 125	
	MSD	1509577-11	32.734	982.48	1000.0	ug/L	6.5	95.0	20	75 - 125	
QC Batch ID: BYD2583	Used client sample: Y - Description: MW-4-3, 04/21/2015 08:40										
Total Recoverable Chromium	DUP	**1509577-06RE2**	**1.4770**	**2.4410**		**ug/L**	**49.2**		**20**		**J,A02**
	MS	**1509577-06RE2**	**1.4770**	**40.900**	**40.000**	**ug/L**		**98.6**		**70 - 130**	
	MSD	**1509577-06RE2**	**1.4770**	**39.300**	**40.000**	**ug/L**	**4.0**	**94.6**	**20**	**70 - 130**	
QC Batch ID: BYD2641	Used client sample: N										
Total Recoverable Chromium	DUP	1510265-01	ND	0.65500		ug/L			20		J
	MS	1510265-01	ND	35.888	40.000	ug/L		89.7		70 - 130	
	MSD	1510265-01	ND	38.892	40.000	ug/L	8.0	97.2	20	70 - 130	

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Analytical Laboratory Service - Since 1947

Certificate of Analysis

Report Date: 05/05/15 15:20
Received Date: 04/23/15 09:50
Turnaround Time: Normal

Project: 1509577

Phones: (661) 327-4911
Fax: (661) 327-1918

P.O. #:

Attn: Misty Orton

Client: BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308

Dear Misty Orton :

Enclosed are the results of analyses for samples received 4/23/2015 with the Chain of Custody document. The samples were received in good condition, at 4.5 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab ID: 5D23011-01 **Sample ID: 1509577-08** **Matrix:** Water
Sampled by: Client **Sampled: 04/21/15 10:10**

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
N-Nitrosodiethylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:08	W5D1479	
N-Nitrosodimethylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:08	W5D1479	
N-Nitrosodi-n-butylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:08	W5D1479	
N-Nitrosodi-n-propylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:08	W5D1479	
N-Nitrosomethylethylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:08	W5D1479	
N-Nitrosomorpholine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:08	W5D1479	
N-Nitrosopiperidine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:08	W5D1479	
N-Nitrosopyrrolidine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:08	W5D1479	

Lab ID: 5D23011-02 **Sample ID: 1509577-13** **Matrix:** Water
Sampled by: Client **Sampled: 04/21/15 13:45**

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
N-Nitrosodiethylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:37	W5D1479	
N-Nitrosodimethylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:37	W5D1479	
N-Nitrosodi-n-butylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:37	W5D1479	
N-Nitrosodi-n-propylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:37	W5D1479	
N-Nitrosomethylethylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:37	W5D1479	
N-Nitrosomorpholine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:37	W5D1479	
N-Nitrosopiperidine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:37	W5D1479	
N-Nitrosopyrrolidine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/4/15 19:37	W5D1479	

Weck Laboratories, Inc. 14859 East Clark Avenue City of Industry, California 91746-3997 (626) 336-2139 FAX: (626) 336-2634
www.weclabs.com

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Quality Control Section

Nitrosamines by isotopic dilution GC/MS CI Mode - Quality Control

Batch W5D1479 - EPA 1625M

Blank (W5D1479-BLK1) — **Prepared: 04/28/15 Analyzed: 05/04/15 17:42**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		ND		ng/l					
N-Nitrosomethylethylamine		ND		ng/l					
N-Nitrosodiethylamine		ND		ng/l					
N-Nitrosodi-n-propylamine		ND		ng/l					
N-Nitrosomorpholine		ND		ng/l					
N-Nitrosopyrrolidine		ND		ng/l					
N-Nitrosopiperidine		ND		ng/l					
N-Nitrosodi-n-butylamine		ND		ng/l					

LCS (W5D1479-BS1) — **Prepared: 04/28/15 Analyzed: 05/05/15 08:14**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		3.60		ng/l	3.00	120	50-150		
N-Nitrosomethylethylamine		3.00		ng/l	3.00	100	50-150		
N-Nitrosodiethylamine		2.88		ng/l	3.00	96	50-150		
N-Nitrosodi-n-propylamine		3.67		ng/l	3.00	122	50-150		
N-Nitrosomorpholine		3.11		ng/l	3.00	104	50-150		
N-Nitrosopyrrolidine		3.77		ng/l	3.00	126	50-150		
N-Nitrosopiperidine		3.30		ng/l	3.00	110	50-150		
N-Nitrosodi-n-butylamine		2.48		ng/l	3.00	83	50-150		

LCS Dup (W5D1479-BSD1) — **Prepared: 04/28/15 Analyzed: 05/05/15 09:14**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		3.38		ng/l	3.00	113	50-150	6	30
N-Nitrosomethylethylamine		3.95		ng/l	3.00	132	50-150	27	30
N-Nitrosodiethylamine		3.75		ng/l	3.00	125	50-150	26	30
N-Nitrosodi-n-propylamine		3.45		ng/l	3.00	115	50-150	6	30
N-Nitrosomorpholine		3.20		ng/l	3.00	107	50-150	3	30
N-Nitrosopyrrolidine		3.81		ng/l	3.00	127	50-150	1	30
N-Nitrosopiperidine		3.24		ng/l	3.00	108	50-150	2	30
N-Nitrosodi-n-butylamine		2.60		ng/l	3.00	87	50-150	5	30

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www.weclabs.com

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Analytical Laboratory Service - Since 1964

Certificate of Analysis

Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Authorized Signature
Contact: Kim G Tu
(Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity
NR	Not Reportable

5D23011 Page 3 of 3

Weck Laboratories, Inc. 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
www.wecklabs.com

Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/15/2015 10:25 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A02	The difference between duplicate readings is less than the quantitation limit.
A07	Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
Q03	Matrix spike recovery(s) is(are) not within the control limits.
S05	The sample holding time was exceeded.
S09	The surrogate recovery on the sample for this compound was not within the control limits.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

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Date of Report: 05/15/2015

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 2nd Qtr. 2015
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1509718
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 4/22/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.

Chain of Custody Form

*Required Fields

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Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:*(614) 792 - 2897 Fax#: (614) 792- 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-09718

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)	Notes
-1	TB-3-4/22/15	4-22-15	0615	AQ	X									
-2	EB-3-4/22/15	↓	0630	↓	X	X	X	X	X	X				
-3	MW-20-5		0700		X	X	X	X	X	X				Level IV
-4	MW-20-4		0740		X	X	X	X	X	X				
-5	MW-20-3		0815		X	X	X	X	X	X				MS/MSD
-6	MW-20-2		0900		X	X	X	X	X	X				
-7	MW-17-5		1000		X	X	X	X	X	X				Level IV
-8	MW-17-4		1040		X	X	X	X	X	X		X	X	
-9	MW-17-3		1140		X	X	X	X	X	X				
-10	MW-17-2		1310		X	X	X	X	X	X				Level IV
-11	MW-17-1	↓	1350	↓	X	X	X	X	X	X				

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 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

CHK BY DISTRIBUTION
SUB OUT ☐

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By:	4-22-15	1530	1.Received By:	4/22/15	1530
2. Relinquished By:	4/22/15	1610	2.Received By:	4/22/15	1610
3. Relinquished By:	4/22/15	1905	3.Received By:	4-22-15	1905

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 and Cooler Receipt Form for 1509718 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 1

Submission #: 15-09718

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 208 Date/Time 4/22/15 1913
Temperature: (A) 2.1 °C / (C) 1.9 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10/11
QT GENERAL MINERAL/ GENERAL		D	D	D	G	D	D	D	D	D
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		E	E	E	H	E	E	E	E	E
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		ABC	ABC	ABC	A-F	ABC	ABC	ABC	ABC	ABC
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER 8270								GM		
8 OZ. JAR 1le amber								P		
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By: M Date/Time: 4/22/15 1930 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509718-01	**COC Number:**	---	**Receive Date:**	04/22/2015 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2015 06:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-3-4/22/15	**Lab Matrix:**	Water
	Sampled By:	BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-3-4/22/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509718-02	**COC Number:**	---	**Receive Date:**	04/22/2015 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2015 06:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-3-4/22/15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-3-4/22/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509718-03	**COC Number:**	---	**Receive Date:**	04/22/2015 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2015 07:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509718-04	**COC Number:**	---	**Receive Date:**	04/22/2015 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2015 07:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509718-05	**COC Number:**	---	**Receive Date:**	04/22/2015 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2015 08:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-3	**Lab Matrix:**	Water
	Sampled By:	C. Moseley of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509718-06	**COC Number:**	---	**Receive Date:**	04/22/2015 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2015 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-2	**Lab Matrix:**	Water
	Sampled By:	C. Moseley of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509718-07	**COC Number:**	---	**Receive Date:**	04/22/2015 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2015 10:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-5	**Lab Matrix:**	Water
	Sampled By:	C. Moseley of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509718-08	**COC Number:**	---	**Receive Date:**	04/22/2015 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2015 10:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-4	**Lab Matrix:**	Water
	Sampled By:	C. Moseley of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509718-09	**COC Number:**	---	**Receive Date:**	04/22/2015 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2015 11:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-3	**Lab Matrix:**	Water
	Sampled By:	C. Moseley of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509718-10	**COC Number:**	---	**Receive Date:**	04/22/2015 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2015 13:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-2	**Lab Matrix:**	Water
	Sampled By:	C. Moseley of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509718-11	**COC Number:**	---	**Receive Date:**	04/22/2015 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2015 13:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-1	**Lab Matrix:**	Water
	Sampled By:	C. Moseley of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-01 | **Client Sample Name:** JPL-GW, TB-3-4/22/15, 4/22/2015 6:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-01 | **Client Sample Name:** JPL-GW, TB-3-4/22/15, 4/22/2015 6:15:00AM

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-01 | **Client Sample Name:** JPL-GW, TB-3-4/22/15, 4/22/2015 6:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/23/15	04/23/15 10:48	MGC	MS-V5	1	BYD1969

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509718-01 | **Client Sample Name:** JPL-GW, TB-3-4/22/15, 4/22/2015 6:15:00AM

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	04/23/15	04/23/15 10:48	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-02 | **Client Sample Name:** JPL-GW, EB-3-4/22/15, 4/22/2015 6:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-02 | **Client Sample Name:** JPL-GW, EB-3-4/22/15, 4/22/2015 6:30:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-02 | **Client Sample Name:** JPL-GW, EB-3-4/22/15, 4/22/2015 6:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.2	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	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	04/23/15	04/23/15 11:10	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509718-02 | **Client Sample Name:** JPL-GW, EB-3-4/22/15, 4/22/2015 6:30:00AM, 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	04/23/15	04/23/15 11:10	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509718-02 | **Client Sample Name:** JPL-GW, EB-3-4/22/15, 4/22/2015 6:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**0.019**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND	**J**	1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	**0.15**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND	**J**	1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.17**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND	**J**	3
Nitrate as N	**0.020**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**0.28**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND	**J**	3
pH	**5.67**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**8.7**	**mg/L**	**6.7**	**6.7**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 13:43	JRG	PE-OP2	1	BYD2658
2	SM-2320B	04/28/15	04/28/15 23:20	RML	MET-1	1	BYD2442
3	EPA-300.0	04/23/15	04/23/15 15:16	BMW	IC5	1	BYD2132
4	EPA-150.1	04/28/15	04/28/15 23:20	RML	MET-1	1	BYD2442
5	EPA-160.1	04/27/15	04/27/15 12:30	CAD	MANUAL	0.667	BYD2295
6	EPA-353.2	04/23/15	04/23/15 09:19	TDC	KONE-1	1	BYD2184
7	EPA-314.0	04/30/15	05/01/15 04:27	OLH	IC6	1	BYE0041

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509718-02 | **Client Sample Name:** JPL-GW, EB-3-4/22/15, 4/22/2015 6:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**66**	**ug/L**	**50**	**6.5**	**EPA-200.7**	41		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/15	04/23/15 01:35	BMW	KONE-1	5	BYD2178
2	EPA-200.8	04/28/15	04/28/15 16:04	SRM	PE-EL2	1	BYD2418
3	EPA-200.7	04/30/15	05/04/15 13:43	JRG	PE-OP2	1	BYD2658

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-03 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2015 7:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-03 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.31**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	**8.2**	**ug/L**	**10**	**4.6**	**EPA-524.2**	ND	**J**	1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.56**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-03 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2015 7:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/23/15	04/23/15 11:33	MGC	MS-V5	1	BYD1969

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509718-03 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2015 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	04/23/15	04/23/15 11:33	MGC	MS-V5	1	BYD1969

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509718-03 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2015 7:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**6.5**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**2.0**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**53**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**140**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**7.1**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**120**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**8.1**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.018**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**4.3**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.70**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**180**	**mg/L**	**10**	**10**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 14:03	JRG	PE-OP2	1	BYD2658
2	SM-2320B	04/28/15	04/28/15 23:25	RML	MET-1	1	BYD2442
3	EPA-300.0	04/23/15	04/23/15 15:34	BMW	IC5	1	BYD2132
4	EPA-150.1	04/28/15	04/28/15 23:25	RML	MET-1	1	BYD2442
5	EPA-160.1	04/27/15	04/27/15 12:30	CAD	MANUAL	1	BYD2295
6	EPA-353.2	04/23/15	04/23/15 09:19	TDC	KONE-1	1	BYD2184
7	EPA-314.0	04/30/15	05/01/15 04:41	OLH	IC6	1	BYE0041

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509718-03 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2015 7:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**120**	**ug/L**	**50**	**6.5**	**EPA-200.7**	41		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/15	04/23/15 01:35	BMW	KONE-1	5	BYD2178
2	EPA-200.8	04/28/15	04/28/15 16:07	SRM	PE-EL2	1	BYD2418
3	EPA-200.7	04/30/15	05/04/15 14:03	JRG	PE-OP2	1	BYD2658

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-04 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-04 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.45**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-04 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.2	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	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	04/23/15	04/23/15 11:56	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509718-04 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2015 7:40:00AM, 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	04/23/15	04/23/15 11:56	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509718-04 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**9.7**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**3.4**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**62**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**0.86**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND	**J**	1
Bicarbonate	**140**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**11**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**130**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**10**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**12**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.78**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**220**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 14:05	JRG	PE-OP2	1	BYD2658
2	SM-2320B	04/29/15	04/29/15 08:36	RML	MET-1	1	BYD2500
3	EPA-300.0	04/23/15	04/23/15 15:51	BMW	IC5	1	BYD2132
4	EPA-150.1	04/29/15	04/29/15 08:36	RML	MET-1	1	BYD2500
5	EPA-160.1	04/27/15	04/27/15 12:30	CAD	MANUAL	2	BYD2295
6	EPA-353.2	04/23/15	04/23/15 09:19	TDC	KONE-1	1	BYD2184
7	EPA-314.0	04/30/15	05/01/15 05:22	OLH	IC6	1	BYE0041

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509718-04 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	**1.5**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**110**	**ug/L**	**50**	**6.5**	**EPA-200.7**	41		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/15	04/23/15 01:35	BMW	KONE-1	5	BYD2178
2	EPA-200.8	04/28/15	04/28/15 16:10	SRM	PE-EL2	1	BYD2418
3	EPA-200.7	04/30/15	05/04/15 14:05	JRG	PE-OP2	1	BYD2658

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-05 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2015 8:15:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-05 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2015 8:15:00AM, C. Moseley

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	0.079	EPA-524.2	ND		1
Ethylbenzene	**0.23**	**ug/L**	**0.50**	**0.098**	**EPA-524.2**	ND	**J**	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.44**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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**	**0.13**	**EPA-524.2**	ND		1
Toluene	**0.12**	**ug/L**	**0.50**	**0.093**	**EPA-524.2**	ND	**J**	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.13**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-05 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2015 8:15:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	92.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/23/15	04/23/15 08:31	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509718-05 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2015 8:15:00AM, C. Moseley

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	04/23/15	04/23/15 08:31	MGC	MS-V5	1	BYD1969

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509718-05 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2015 8:15:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**8.5**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**7.5**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**51**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**75**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**11**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**81**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**46**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.077**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**9.02**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**210**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/15	05/08/15 17:14	JRG	PE-OP2	1	BYE0741
2	SM-2320B	04/29/15	04/29/15 08:53	RML	MET-1	1	BYD2500
3	EPA-300.0	04/23/15	04/23/15 13:32	OLH	IC5	1	BYD2132
4	EPA-150.1	04/29/15	04/29/15 08:53	RML	MET-1	1	BYD2500
5	EPA-160.1	04/27/15	04/27/15 12:30	CAD	MANUAL	2	BYD2295
6	EPA-353.2	04/23/15	04/23/15 09:15	TDC	KONE-1	1	BYD2184
7	EPA-314.0	04/30/15	05/01/15 03:31	OLH	IC6	1	BYE0041

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509718-05 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2015 8:15:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	**0.72**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**62**	**ug/L**	**50**	**6.5**	**EPA-200.7**	41		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/15	04/23/15 01:35	BMW	KONE-1	5	BYD2178
2	EPA-200.8	04/28/15	04/28/15 15:36	SRM	PE-EL2	1	BYD2418
3	EPA-200.7	04/30/15	05/04/15 14:08	JRG	PE-OP2	1	BYD2658

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-06 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2015 9:00:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.23**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-06 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2015 9:00:00AM, C. Moseley

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.070**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.16**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.28**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-06 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2015 9:00:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/23/15	04/23/15 12:19	MGC	MS-V5	1	BYD1969

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509718-06 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2015 9:00:00AM, C. Moseley

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	04/23/15	04/23/15 12:19	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509718-06 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2015 9:00:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**49**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**22**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**17**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**22**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**2.6**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**36**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.09**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**310**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 14:11	JRG	PE-OP2	1	BYD2658
2	SM-2320B	04/29/15	04/29/15 09:00	RML	MET-1	1	BYD2500
3	EPA-300.0	04/23/15	04/23/15 16:08	BMW	IC5	1	BYD2132
4	EPA-150.1	04/29/15	04/29/15 09:00	RML	MET-1	1	BYD2500
5	EPA-160.1	04/27/15	04/27/15 12:30	CAD	MANUAL	2	BYD2295
6	EPA-353.2	04/23/15	04/23/15 09:19	TDC	KONE-1	1	BYD2184
7	EPA-314.0	04/30/15	05/01/15 05:36	OLH	IC6	1	BYE0041

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509718-06 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2015 9:00:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**80**	**ug/L**	**50**	**6.5**	**EPA-200.7**	41		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/15	04/23/15 01:35	BMW	KONE-1	5	BYD2178
2	EPA-200.8	04/28/15	04/28/15 16:14	SRM	PE-EL2	1	BYD2418
3	EPA-200.7	04/30/15	05/04/15 14:11	JRG	PE-OP2	1	BYD2658

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-07 | **Client Sample Name:** JPL-GW, MW-17-5, 4/22/2015 10:00:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-07 | **Client Sample Name:** JPL-GW, MW-17-5, 4/22/2015 10:00:00AM, C. Moseley

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.10**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-07 | **Client Sample Name:** JPL-GW, MW-17-5, 4/22/2015 10:00:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.6	%	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	04/23/15	04/23/15 12:41	MGC	MS-V5	1	BYD1969

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509718-07 | **Client Sample Name:** JPL-GW, MW-17-5, 4/22/2015 10:00:00AM, C. Moseley

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	04/23/15	04/23/15 12:41	MGC	MS-V5	1	BYD1969

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509718-07 | **Client Sample Name:** JPL-GW, MW-17-5, 4/22/2015 10:00:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**12**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**3.7**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**56**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**140**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**120**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**9.4**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**20**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.20**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**210**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 14:13	JRG	PE-OP2	1	BYD2658
2	SM-2320B	04/29/15	04/29/15 13:11	RML	MET-1	1	BYD2502
3	EPA-300.0	04/23/15	04/23/15 16:26	BMW	IC5	1	BYD2132
4	EPA-150.1	04/29/15	04/29/15 13:11	RML	MET-1	1	BYD2502
5	EPA-160.1	04/27/15	04/27/15 12:30	CAD	MANUAL	2	BYD2295
6	EPA-353.2	04/23/15	04/23/15 09:19	TDC	KONE-1	1	BYD2184
7	EPA-314.0	04/30/15	05/01/15 05:50	OLH	IC6	1	BYE0041

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509718-07 | **Client Sample Name:** JPL-GW, MW-17-5, 4/22/2015 10:00:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	**9.0**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**0.67**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**1800**	**ug/L**	**50**	**6.5**	**EPA-200.7**	41		3
Total Recoverable Lead	**0.93**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/15	04/23/15 01:35	BMW	KONE-1	5	BYD2178
2	EPA-200.8	04/28/15	04/28/15 16:17	SRM	PE-EL2	1	BYD2418
3	EPA-200.7	04/30/15	05/04/15 14:13	JRG	PE-OP2	1	BYD2658

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-08 | **Client Sample Name:** JPL-GW, MW-17-4, 4/22/2015 10:40:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.30**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-08 | **Client Sample Name:** JPL-GW, MW-17-4, 4/22/2015 10:40:00AM, C. Moseley

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.88**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-08 | **Client Sample Name:** JPL-GW, MW-17-4, 4/22/2015 10:40:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.8	%	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	04/23/15	04/23/15 13:04	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509718-08 | **Client Sample Name:** JPL-GW, MW-17-4, 4/22/2015 10:40:00AM, C. Moseley

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	04/23/15	04/23/15 13:04	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

BCL Sample ID: 1509718-08 | **Client Sample Name:** JPL-GW, MW-17-4, 4/22/2015 10:40:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,4-Dioxane	ND	ug/L	1.0	0.21	EPA-8270C	ND		1
Naphthalene-d8 (Surrogate)	87.0	%	75 - 132 (LCL - UCL)		EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	04/24/15	04/27/15 22:44	MK1	MS-B4	0.980	BYD2332

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509718-08 | **Client Sample Name:** JPL-GW, MW-17-4, 4/22/2015 10:40:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**22**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**6.5**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**56**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**160**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**130**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**13**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.43**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**23**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.25**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**240**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	**0.042**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND	**J**	6
Perchlorate	**1.4**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 14:16	JRG	PE-OP2	1	BYD2658
2	SM-2320B	04/27/15	04/27/15 08:34	RML	MET-1	1	BYD2260
3	EPA-300.0	04/23/15	04/23/15 16:43	BMW	IC5	1	BYD2132
4	EPA-150.1	04/27/15	04/27/15 08:34	RML	MET-1	1	BYD2260
5	EPA-160.1	04/27/15	04/27/15 12:30	CAD	MANUAL	2	BYD2295
6	EPA-353.2	04/23/15	04/23/15 09:19	TDC	KONE-1	1	BYD2184
7	EPA-314.0	04/30/15	05/01/15 06:04	OLH	IC6	1	BYE0041

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509718-08 | **Client Sample Name:** JPL-GW, MW-17-4, 4/22/2015 10:40:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	**3.2**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**0.74**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**180**	**ug/L**	**50**	**6.5**	**EPA-200.7**	41		3
Total Recoverable Lead	**0.12**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/15	04/23/15 01:35	BMW	KONE-1	5	BYD2178
2	EPA-200.8	04/28/15	04/28/15 16:20	SRM	PE-EL2	1	BYD2418
3	EPA-200.7	04/30/15	05/04/15 14:16	JRG	PE-OP2	1	BYD2658

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-09 | **Client Sample Name:** JPL-GW, MW-17-3, 4/22/2015 11:40:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.34**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.15**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-09 | **Client Sample Name:** JPL-GW, MW-17-3, 4/22/2015 11:40:00AM, C. Moseley

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.65**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-09 | **Client Sample Name:** JPL-GW, MW-17-3, 4/22/2015 11:40:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.6	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.1	%	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	04/23/15	04/23/15 13:27	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509718-09 | **Client Sample Name:** JPL-GW, MW-17-3, 4/22/2015 11:40:00AM, C. Moseley

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	04/23/15	04/23/15 13:27	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509718-09 | **Client Sample Name:** JPL-GW, MW-17-3, 4/22/2015 11:40:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**82**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**40**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**31**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**79**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**11**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**99**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.82**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**500**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**5.8**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 14:18	JRG	PE-OP2	1	BYD2658
2	SM-2320B	04/27/15	04/27/15 10:22	RML	MET-1	1	BYD2260
3	EPA-300.0	04/23/15	04/23/15 17:01	BMW	IC5	1	BYD2132
4	EPA-150.1	04/27/15	04/27/15 10:22	RML	MET-1	1	BYD2260
5	EPA-160.1	04/27/15	04/27/15 12:30	CAD	MANUAL	3.333	BYD2295
6	EPA-353.2	04/23/15	04/23/15 09:19	TDC	KONE-1	1	BYD2184
7	EPA-314.0	04/30/15	05/01/15 10:06	OLH	IC6	1	BYE0041

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509718-09 | **Client Sample Name:** JPL-GW, MW-17-3, 4/22/2015 11:40:00AM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**180**	**ug/L**	**50**	**6.5**	**EPA-200.7**	41		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/15	04/23/15 01:39	BMW	KONE-1	5	BYD2178
2	EPA-200.8	04/28/15	04/28/15 16:23	SRM	PE-EL2	1	BYD2418
3	EPA-200.7	04/30/15	05/04/15 14:18	JRG	PE-OP2	1	BYD2658

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-10 | **Client Sample Name:** JPL-GW, MW-17-2, 4/22/2015 1:10:00PM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.35**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-10 | **Client Sample Name:** JPL-GW, MW-17-2, 4/22/2015 1:10:00PM, C. Moseley

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.24**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.95**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-10 | **Client Sample Name:** JPL-GW, MW-17-2, 4/22/2015 1:10:00PM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.9	%	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	04/23/15	04/23/15 13:49	MGC	MS-V5	1	BYD1969

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509718-10 | **Client Sample Name:** JPL-GW, MW-17-2, 4/22/2015 1:10:00PM, C. Moseley

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	04/23/15	04/23/15 13:49	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509718-10 | **Client Sample Name:** JPL-GW, MW-17-2, 4/22/2015 1:10:00PM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**82**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**31**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**23**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.4**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**270**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**230**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**46**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**3.4**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**60**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.85**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**380**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 14:21	JRG	PE-OP2	1	BYD2658
2	SM-2320B	04/27/15	04/27/15 10:29	RML	MET-1	1	BYD2260
3	EPA-300.0	04/23/15	04/23/15 17:53	BMW	IC5	1	BYD2132
4	EPA-150.1	04/27/15	04/27/15 10:29	RML	MET-1	1	BYD2260
5	EPA-160.1	04/27/15	04/27/15 12:30	CAD	MANUAL	2	BYD2295
6	EPA-353.2	04/23/15	04/23/15 09:22	TDC	KONE-1	1	BYD2184
7	EPA-314.0	04/30/15	05/01/15 06:31	OLH	IC6	1	BYE0041

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509718-10 | **Client Sample Name:** JPL-GW, MW-17-2, 4/22/2015 1:10:00PM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**310**	**ug/L**	**50**	**6.5**	**EPA-200.7**	41		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/15	04/23/15 01:39	BMW	KONE-1	5	BYD2178
2	EPA-200.8	04/28/15	04/28/15 16:26	SRM	PE-EL2	1	BYD2418
3	EPA-200.7	04/30/15	05/04/15 14:21	JRG	PE-OP2	1	BYD2658

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-11 | **Client Sample Name:** JPL-GW, MW-17-1, 4/22/2015 1:50:00PM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-11 | **Client Sample Name:** JPL-GW, MW-17-1, 4/22/2015 1:50:00PM, C. Moseley

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509718-11 | **Client Sample Name:** JPL-GW, MW-17-1, 4/22/2015 1:50:00PM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.6	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.5	%	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	04/23/15	04/23/15 14:12	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509718-11 | **Client Sample Name:** JPL-GW, MW-17-1, 4/22/2015 1:50:00PM, C. Moseley

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	04/23/15	04/23/15 14:12	MGC	MS-V5	1	BYD1969

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509718-11 | **Client Sample Name:** JPL-GW, MW-17-1, 4/22/2015 1:50:00PM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**56**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**20**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**20**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**16**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.66**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**29**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.80**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**280**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 14:24	JRG	PE-OP2	1	BYD2658
2	SM-2320B	04/27/15	04/27/15 10:37	RML	MET-1	1	BYD2260
3	EPA-300.0	04/23/15	04/23/15 18:10	BMW	IC5	1	BYD2132
4	EPA-150.1	04/27/15	04/27/15 10:37	RML	MET-1	1	BYD2260
5	EPA-160.1	04/27/15	04/27/15 12:30	CAD	MANUAL	2	BYD2295
6	EPA-353.2	04/23/15	04/23/15 09:08	TDC	KONE-1	1	BYD2184
7	EPA-314.0	04/30/15	05/01/15 06:45	OLH	IC6	1	BYE0041

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509718-11 | **Client Sample Name:** JPL-GW, MW-17-1, 4/22/2015 1:50:00PM, C. Moseley

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**190**	**ug/L**	**50**	**6.5**	**EPA-200.7**	41		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/15	04/23/15 01:39	BMW	KONE-1	5	BYD2178
2	EPA-200.8	04/28/15	04/28/15 16:30	SRM	PE-EL2	1	BYD2418
3	EPA-200.7	04/30/15	05/04/15 14:24	JRG	PE-OP2	1	BYD2658

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1969						
Benzene	BYD1969-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYD1969-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYD1969-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYD1969-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYD1969-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYD1969-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYD1969-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYD1969-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYD1969-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYD1969-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYD1969-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYD1969-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYD1969-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYD1969-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYD1969-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYD1969-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYD1969-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYD1969-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYD1969-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYD1969-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYD1969-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYD1969-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYD1969-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYD1969-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYD1969-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYD1969-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYD1969-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYD1969-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYD1969-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYD1969-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYD1969-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYD1969-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYD1969-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYD1969-BLK1	ND	ug/L	0.50	0.14	

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1969						
trans-1,3-Dichloropropene	BYD1969-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYD1969-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYD1969-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYD1969-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYD1969-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYD1969-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BYD1969-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYD1969-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYD1969-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYD1969-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYD1969-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYD1969-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYD1969-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYD1969-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYD1969-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYD1969-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYD1969-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYD1969-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYD1969-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYD1969-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYD1969-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYD1969-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYD1969-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYD1969-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYD1969-BLK1	ND	ug/L	0.50	0.12	
Acetone	BYD1969-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BYD1969-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BYD1969-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BYD1969-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BYD1969-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BYD1969-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BYD1969-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BYD1969-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BYD1969-BLK1	ND	ug/L	4.0	0.97	

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1969						
Ethyl t-butyl ether	BYD1969-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BYD1969-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BYD1969-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BYD1969-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BYD1969-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BYD1969-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BYD1969-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BYD1969-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BYD1969-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BYD1969-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BYD1969-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BYD1969-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYD1969-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYD1969-BLK1**	**96.8**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYD1969-BLK1**	**101**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYD1969-BLK1**	**95.6**	%	**80 - 120 (LCL - UCL)**		

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD1969										
Benzene	BYD1969-BS1	LCS	24.280	25.000	ug/L	97.1		70 - 130		
Bromodichloromethane	BYD1969-BS1	LCS	24.560	25.000	ug/L	98.2		70 - 130		
Chlorobenzene	BYD1969-BS1	LCS	25.870	25.000	ug/L	103		70 - 130		
Chloroethane	BYD1969-BS1	LCS	23.400	25.000	ug/L	93.6		70 - 130		
1,4-Dichlorobenzene	BYD1969-BS1	LCS	24.790	25.000	ug/L	99.2		70 - 130		
1,1-Dichloroethane	BYD1969-BS1	LCS	23.370	25.000	ug/L	93.5		70 - 130		
1,1-Dichloroethene	BYD1969-BS1	LCS	25.390	25.000	ug/L	102		70 - 130		
Toluene	BYD1969-BS1	LCS	24.310	25.000	ug/L	97.2		70 - 130		
Trichloroethene	BYD1969-BS1	LCS	25.190	25.000	ug/L	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYD1969-BS1	LCS	9.2100	10.000	ug/L	92.1		75 - 125		
Toluene-d8 (Surrogate)	BYD1969-BS1	LCS	9.8700	10.000	ug/L	98.7		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYD1969-BS1	LCS	9.8300	10.000	ug/L	98.3		80 - 120		

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD1969	Used client sample: Y - Description: MW-20-3, 04/22/2015 08:15										
Benzene	MS	1509718-05	ND	24.010	25.000	ug/L		96.0		70 - 130	
	MSD	1509718-05	ND	24.140	25.000	ug/L	0.5	96.6	20	70 - 130	
Bromodichloromethane	MS	1509718-05	ND	25.080	25.000	ug/L		100		70 - 130	
	MSD	1509718-05	ND	25.950	25.000	ug/L	3.4	104	20	70 - 130	
Chlorobenzene	MS	1509718-05	ND	25.980	25.000	ug/L		104		70 - 130	
	MSD	1509718-05	ND	25.790	25.000	ug/L	0.7	103	20	70 - 130	
Chloroethane	MS	1509718-05	ND	23.480	25.000	ug/L		93.9		70 - 130	
	MSD	1509718-05	ND	23.950	25.000	ug/L	2.0	95.8	20	70 - 130	
1,4-Dichlorobenzene	MS	1509718-05	ND	24.770	25.000	ug/L		99.1		70 - 130	
	MSD	1509718-05	ND	24.780	25.000	ug/L	0.0	99.1	20	70 - 130	
1,1-Dichloroethane	MS	1509718-05	ND	23.550	25.000	ug/L		94.2		70 - 130	
	MSD	1509718-05	ND	24.060	25.000	ug/L	2.1	96.2	20	70 - 130	
1,1-Dichloroethene	MS	1509718-05	ND	24.870	25.000	ug/L		99.5		70 - 130	
	MSD	1509718-05	ND	25.210	25.000	ug/L	1.4	101	20	70 - 130	
Toluene	MS	1509718-05	0.12000	24.500	25.000	ug/L		97.5		70 - 130	
	MSD	1509718-05	0.12000	25.200	25.000	ug/L	2.8	100	20	70 - 130	
Trichloroethene	MS	1509718-05	0.13000	26.070	25.000	ug/L		104		70 - 130	
	MSD	1509718-05	0.13000	25.990	25.000	ug/L	0.3	103	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1509718-05	ND	9.2000	10.000	ug/L		92.0		75 - 125	
	MSD	1509718-05	ND	9.0900	10.000	ug/L	1.2	90.9		75 - 125	
Toluene-d8 (Surrogate)	MS	1509718-05	ND	9.7500	10.000	ug/L		97.5		80 - 120	
	MSD	1509718-05	ND	9.8200	10.000	ug/L	0.7	98.2		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1509718-05	ND	9.6700	10.000	ug/L		96.7		80 - 120	
	MSD	1509718-05	ND	10.140	10.000	ug/L	4.7	101		80 - 120	

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD1969						
Chloroacetonitrile	BYD1969-BLK1	0	ug/L			
1-Chlorobutane	BYD1969-BLK1	0	ug/L			
1,1-Dichloropropanone	BYD1969-BLK1	0	ug/L			
Methyl acrylate	BYD1969-BLK1	0	ug/L			
Nitrobenzene	BYD1969-BLK1	0	ug/L			
2-Nitropropane	BYD1969-BLK1	0	ug/L			

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Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/15/2015 15:57 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYD2332						
1,4-Dioxane	BYD2332-BLK1	ND	ug/L	1.0	0.21	
Naphthalene-d8 (Surrogate)	**BYD2332-BLK1**	**93.0**	%	**75 - 132 (LCL - UCL)**		

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2332										
1,4-Dioxane	BYD2332-BS1	LCS	41.313	50.000	ug/L	82.6		70 - 130		
Naphthalene-d8 (Surrogate)	BYD2332-BS1	LCS	35.967	40.000	ug/L	89.9		75 - 132		

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2332	Used client sample: N										
1,4-Dioxane	MS	1506890-65	ND	41.254	50.000	ug/L		82.5		70 - 130	
	MSD	1506890-65	ND	46.440	50.000	ug/L	11.8	92.9	30	70 - 130	
Naphthalene-d8 (Surrogate)	MS	1506890-65	ND	33.640	40.000	ug/L		84.1		75 - 132	
	MSD	1506890-65	ND	37.120	40.000	ug/L	9.8	92.8		75 - 132	

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Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2132						
Chloride	BYD2132-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD2132-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD2132-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD2184						
Nitrite as N	BYD2184-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD2260						
Bicarbonate	BYD2260-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2260-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2260-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2295						
Total Dissolved Solids @ 180 C	BYD2295-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYD2442						
Bicarbonate	BYD2442-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2442-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2442-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2500						
Bicarbonate	BYD2500-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2500-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2500-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2502						
Bicarbonate	BYD2502-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2502-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2502-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2658						
Total Recoverable Calcium	BYD2658-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	BYD2658-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	BYD2658-BLK1	ND	mg/L	0.50	0.017	
Total Recoverable Potassium	BYD2658-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE0041						
Perchlorate	BYE0041-BLK1	ND	ug/L	4.0	1.3	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYE0741						
Total Recoverable Calcium	**BYE0741-BLK1**	**0.016183**	**mg/L**	**0.10**	**0.014**	**J**
Total Recoverable Magnesium	BYE0741-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	BYE0741-BLK1	ND	mg/L	0.50	0.017	
Total Recoverable Potassium	BYE0741-BLK1	ND	mg/L	1.0	0.10	

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2132										
Chloride	BYD2132-BS1	LCS	49.074	50.000	mg/L	98.1		90 - 110		
Nitrate as N	BYD2132-BS1	LCS	4.9090	5.0000	mg/L	98.2		90 - 110		
Sulfate	BYD2132-BS1	LCS	97.265	100.00	mg/L	97.3		90 - 110		
QC Batch ID: BYD2184										
Nitrite as N	BYD2184-BS1	LCS	0.49577	0.50000	mg/L	99.2		90 - 110		
QC Batch ID: BYD2260										
Total Alkalinity as CaCO3	BYD2260-BS3	LCS	107.41	100.00	mg/L	107		90 - 110		
pH	BYD2260-BS2	LCS	7.0500	7.0000	pH Units	101		95 - 105		
QC Batch ID: BYD2295										
Total Dissolved Solids @ 180 C	BYD2295-BS1	LCS	555.00	586.00	mg/L	94.7		90 - 110		
QC Batch ID: BYD2442										
Total Alkalinity as CaCO3	BYD2442-BS3	LCS	100.56	100.00	mg/L	101		90 - 110		
pH	BYD2442-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD2500										
Total Alkalinity as CaCO3	BYD2500-BS3	LCS	108.47	100.00	mg/L	108		90 - 110		
pH	BYD2500-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD2502										
Total Alkalinity as CaCO3	BYD2502-BS3	LCS	100.56	100.00	mg/L	101		90 - 110		
pH	BYD2502-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD2658										
Total Recoverable Calcium	BYD2658-BS1	LCS	10.470	10.000	mg/L	105		85 - 115		
Total Recoverable Magnesium	BYD2658-BS1	LCS	11.005	10.000	mg/L	110		85 - 115		
Total Recoverable Sodium	BYD2658-BS1	LCS	10.466	10.000	mg/L	105		85 - 115		
Total Recoverable Potassium	BYD2658-BS1	LCS	10.236	10.000	mg/L	102		85 - 115		
QC Batch ID: BYE0041										
Perchlorate	BYE0041-BS1	LCS	10.596	10.000	ug/L	106		85 - 115		
QC Batch ID: BYE0741										
Total Recoverable Calcium	BYE0741-BS1	LCS	10.210	10.000	mg/L	102		85 - 115		
Total Recoverable Magnesium	BYE0741-BS1	LCS	10.867	10.000	mg/L	109		85 - 115		
Total Recoverable Sodium	BYE0741-BS1	LCS	10.298	10.000	mg/L	103		85 - 115		
Total Recoverable Potassium	BYE0741-BS1	LCS	9.8775	10.000	mg/L	98.8		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2132	Used client sample: Y - Description: MW-20-3, 04/22/2015 08:15										
Chloride	DUP	1509718-05	45.897	45.708		mg/L	0.4		10		
	MS	1509718-05	45.897	100.51	50.505	mg/L		108		80 - 120	
	MSD	1509718-05	45.897	100.34	50.505	mg/L	0.2	108	10	80 - 120	
Nitrate as N	DUP	1509718-05	0.077000	0.081000		mg/L	5.1		10		J
	MS	1509718-05	0.077000	5.2798	5.0505	mg/L		103		80 - 120	
	MSD	1509718-05	0.077000	5.2808	5.0505	mg/L	0.0	103	10	80 - 120	
Sulfate	DUP	1509718-05	3.1660	3.3030		mg/L	4.2		10		
	MS	1509718-05	3.1660	108.04	101.01	mg/L		104		80 - 120	
	MSD	1509718-05	3.1660	107.91	101.01	mg/L	0.1	104	10	80 - 120	
QC Batch ID: BYD2184	Used client sample: Y - Description: MW-20-3, 04/22/2015 08:15										
Nitrite as N	DUP	1509718-05	ND	ND		mg/L			10		
	MS	1509718-05	ND	0.53477	0.52632	mg/L		102		90 - 110	
	MSD	1509718-05	ND	0.53804	0.52632	mg/L	0.6	102	10	90 - 110	
QC Batch ID: BYD2260	Used client sample: Y - Description: MW-17-4, 04/22/2015 10:40										
Bicarbonate	DUP	1509718-08	157.12	157.67		mg/L	0.3		10		
Carbonate	DUP	1509718-08	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1509718-08	128.86	129.31		mg/L	0.3		10		
pH	DUP	1509718-08	8.2500	8.2800		pH Units	0.4		20		
QC Batch ID: BYD2295	Used client sample: Y - Description: MW-20-3, 04/22/2015 08:15										
Total Dissolved Solids @ 180 C	DUP	1509718-05	212.00	212.00		mg/L	0		10		
QC Batch ID: BYD2442	Used client sample: N										
Bicarbonate	DUP	1509683-01	88.666	87.739		mg/L	1.1		10		
Carbonate	DUP	1509683-01	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1509683-01	72.720	71.960		mg/L	1.1		10		
pH	DUP	1509683-01	8.0300	7.9700		pH Units	0.7		20		
QC Batch ID: BYD2500	Used client sample: Y - Description: MW-20-4, 04/22/2015 07:40										
Bicarbonate	DUP	1509718-04	136.52	136.89		mg/L	0.3		10		
Carbonate	DUP	1509718-04	11.308	10.582		mg/L	6.6		10		
Total Alkalinity as CaCO3	DUP	1509718-04	130.83	129.92		mg/L	0.7		10		
pH	DUP	1509718-04	8.7800	8.7900		pH Units	0.1		20		
QC Batch ID: BYD2502	Used client sample: Y - Description: MW-23-4, 04/27/2015 07:30										
Bicarbonate	DUP	1510030-04	178.62	177.89		mg/L	0.4		10		
Carbonate	DUP	1510030-04	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1510030-04	146.50	145.90		mg/L	0.4		10		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2502	Used client sample: Y - Description: MW-23-4, 04/27/2015 07:30										
pH	DUP	1510030-04	8.1800	8.2000		pH Units	0.2		20		
QC Batch ID: BYD2658	Used client sample: Y - Description: EB-3-4/22/15, 04/22/2015 06:30										
Total Recoverable Calcium	DUP	**1509718-02RE1**	**0.019129**	**0.032759**		**mg/L**	**52.5**		**20**		**J,A02**
	MS	**1509718-02RE1**	**0.019129**	**10.026**	**10.000**	**mg/L**		**100**		**75 - 125**	
	MSD	**1509718-02RE1**	**0.019129**	**10.040**	**10.000**	**mg/L**	**0.1**	**100**	**20**	**75 - 125**	
Total Recoverable Magnesium	DUP	509718-02RE1	ND	ND		mg/L			20		
	MS	509718-02RE1	ND	10.752	10.000	mg/L		108		75 - 125	
	MSD	509718-02RE1	ND	10.607	10.000	mg/L	1.4	106	20	75 - 125	
Total Recoverable Sodium	DUP	509718-02RE1	0.15179	0.14065		mg/L	7.6		20		J
	MS	509718-02RE1	0.15179	10.092	10.000	mg/L		99.4		75 - 125	
	MSD	509718-02RE1	0.15179	10.088	10.000	mg/L	0.0	99.4	20	75 - 125	
Total Recoverable Potassium	DUP	509718-02RE1	ND	ND		mg/L			20		
	MS	509718-02RE1	ND	9.7837	10.000	mg/L		97.8		75 - 125	
	MSD	509718-02RE1	ND	9.7204	10.000	mg/L	0.6	97.2	20	75 - 125	
QC Batch ID: BYE0041	Used client sample: Y - Description: MW-20-3, 04/22/2015 08:15										
Perchlorate	DUP	1509718-05	ND	ND		ug/L			15		
	MS	1509718-05	ND	10.466	10.101	ug/L		104		80 - 120	
	MSD	1509718-05	ND	10.006	10.101	ug/L	4.5	99.1	15	80 - 120	
QC Batch ID: BYE0741	Used client sample: N										
Total Recoverable Calcium	DUP	**1510977-01**	**225.98**	**219.15**		**mg/L**	**3.1**		**20**		
	MS	**1510977-01**	**225.98**	**232.99**	**10.000**	**mg/L**		**70.2**		**75 - 125**	**A03**
	MSD	**1510977-01**	**225.98**	**216.52**	**10.000**	**mg/L**	**7.3**	**-94.5**	**20**	**75 - 125**	**A03**
Total Recoverable Magnesium	DUP	**1510977-01**	**61.444**	**60.354**		**mg/L**	**1.8**		**20**		
	MS	**1510977-01**	**61.444**	**71.023**	**10.000**	**mg/L**		**95.8**		**75 - 125**	
	MSD	**1510977-01**	**61.444**	**66.090**	**10.000**	**mg/L**	**7.2**	**46.5**	**20**	**75 - 125**	**A03**
Total Recoverable Sodium	DUP	1510977-01	23.950	23.238		mg/L	3.0		20		
	MS	1510977-01	23.950	34.006	10.000	mg/L		101		75 - 125	
	MSD	1510977-01	23.950	31.732	10.000	mg/L	6.9	77.8	20	75 - 125	
Total Recoverable Potassium	DUP	1510977-01	1.4310	1.3993		mg/L	2.2		20		
	MS	1510977-01	1.4310	11.970	10.000	mg/L		105		75 - 125	
	MSD	1510977-01	1.4310	11.367	10.000	mg/L	5.2	99.4	20	75 - 125	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2178						
Hexavalent Chromium	BYD2178-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYD2418						
Total Recoverable Arsenic	BYD2418-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BYD2418-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BYD2418-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYD2658						
Total Recoverable Iron	**BYD2658-BLK1**	**40.863**	**ug/L**	**50**	**6.5**	**J**

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2178										
Hexavalent Chromium	BYD2178-BS1	LCS	0.050108	0.050000	mg/L	100		85 - 115		
QC Batch ID: BYD2418										
Total Recoverable Arsenic	BYD2418-BS1	LCS	100.28	100.00	ug/L	100		85 - 115		
Total Recoverable Chromium	BYD2418-BS1	LCS	40.696	40.000	ug/L	102		85 - 115		
Total Recoverable Lead	BYD2418-BS1	LCS	106.03	100.00	ug/L	106		85 - 115		
QC Batch ID: BYD2658										
Total Recoverable Iron	BYD2658-BS1	LCS	1108.3	1000.0	ug/L	111		85 - 115		

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Reported: 05/15/2015 15:57
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2178	Used client sample: Y - Description: MW-20-3, 04/22/2015 08:15										
Hexavalent Chromium	DUP	1509718-05	ND	ND		mg/L			10		
	MS	1509718-05	ND	0.24062	0.26316	mg/L		91.4		85 - 115	
	MSD	1509718-05	ND	0.23945	0.26316	mg/L	0.5	91.0	10	85 - 115	
QC Batch ID: BYD2418	Used client sample: Y - Description: MW-20-3, 04/22/2015 08:15										
Total Recoverable Arsenic	DUP	1509718-05	0.71500	ND		ug/L			20		
	MS	1509718-05	0.71500	104.69	100.00	ug/L		104		70 - 130	
	MSD	1509718-05	0.71500	101.76	100.00	ug/L	2.8	101	20	70 - 130	
Total Recoverable Chromium	DUP	1509718-05	ND	ND		ug/L			20		
	MS	1509718-05	ND	39.573	40.000	ug/L		98.9		70 - 130	
	MSD	1509718-05	ND	38.611	40.000	ug/L	2.5	96.5	20	70 - 130	
Total Recoverable Lead	DUP	1509718-05	ND	ND		ug/L			20		
	MS	1509718-05	ND	101.56	100.00	ug/L		102		70 - 130	
	MSD	1509718-05	ND	100.64	100.00	ug/L	0.9	101	20	70 - 130	
QC Batch ID: BYD2658	Used client sample: Y - Description: EB-3-4/22/15, 04/22/2015 06:30										
Total Recoverable Iron	DUP	509718-02RE´	66.342	55.893		ug/L	17.1		20		
	MS	509718-02RE´	66.342	1065.7	1000.0	ug/L		99.9		75 - 125	
	MSD	509718-02RE´	66.342	1056.8	1000.0	ug/L	0.8	99.0	20	75 - 125	

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WECK LABORATORIES, INC.
Analytical Laboratory Service - Since 1947

Certificate of Analysis

Report Date: 05/05/15 15:20
Received Date: 04/24/15 09:50
Turnaround Time: Normal

Project: 1509718

Phones: (661) 327-4911
Fax: (661) 327-1918

P.O. #:

Attn: Misty Orton

Client: BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308

Dear Misty Orton :

Enclosed are the results of analyses for samples received 4/24/2015 with the Chain of Custody document. The samples were received in good condition, at 5.3 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab ID: 5D24019-01 **Sample ID: 1509718-08** **Matrix:** Water
Sampled by: Client **Sampled: 04/22/15 10:40**

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
N-Nitrosodiethylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/5/15 10:11	W5D1479	
N-Nitrosodimethylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/5/15 10:11	W5D1479	
N-Nitrosodi-n-butylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/5/15 10:11	W5D1479	
N-Nitrosodi-n-propylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/5/15 10:11	W5D1479	
N-Nitrosomethylethylamine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/5/15 10:11	W5D1479	
N-Nitrosomorpholine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/5/15 10:11	W5D1479	
N-Nitrosopiperidine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/5/15 10:11	W5D1479	
N-Nitrosopyrrolidine	ND		2.0	ng/l	1	EPA 1625M	4/28/15	5/5/15 10:11	W5D1479	

Weck Laboratories, Inc. 14859 East Clark Avenue, City of Industry, California 91745-1030 (626) 336-2139 FAX (626) 336-2634
www.weclabs.com

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WECK LABORATORIES, INC.
Analytical Laboratory Service - Since 1949

Certificate of Analysis

Quality Control Section

Nitrosamines by isotopic dilution GC/MS CI Mode - Quality Control

Batch W5D1479 - EPA 1625M

Blank (W5D1479-BLK1) — **Prepared: 04/28/15 Analyzed: 05/04/15 17:42**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		ND		ng/l					
N-Nitrosomethylethylamine		ND		ng/l					
N-Nitrosodiethylamine		ND		ng/l					
N-Nitrosodi-n-propylamine		ND		ng/l					
N-Nitrosomorpholine		ND		ng/l					
N-Nitrosopyrrolidine		ND		ng/l					
N-Nitrosopiperidine		ND		ng/l					
N-Nitrosodi-n-butylamine		ND		ng/l					

LCS (W5D1479-BS1) — **Prepared: 04/28/15 Analyzed: 05/05/15 08:14**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		3.60		ng/l	3.00	120	50-150		
N-Nitrosomethylethylamine		3.00		ng/l	3.00	100	50-150		
N-Nitrosodiethylamine		2.88		ng/l	3.00	96	50-150		
N-Nitrosodi-n-propylamine		3.67		ng/l	3.00	122	50-150		
N-Nitrosomorpholine		3.11		ng/l	3.00	104	50-150		
N-Nitrosopyrrolidine		3.77		ng/l	3.00	126	50-150		
N-Nitrosopiperidine		3.30		ng/l	3.00	110	50-150		
N-Nitrosodi-n-butylamine		2.48		ng/l	3.00	83	50-150		

LCS Dup (W5D1479-BSD1) — **Prepared: 04/28/15 Analyzed: 05/05/15 09:14**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		3.38		ng/l	3.00	113	50-150	6	30
N-Nitrosomethylethylamine		3.95		ng/l	3.00	132	50-150	27	30
N-Nitrosodiethylamine		3.75		ng/l	3.00	125	50-150	26	30
N-Nitrosodi-n-propylamine		3.45		ng/l	3.00	115	50-150	6	30
N-Nitrosomorpholine		3.20		ng/l	3.00	107	50-150	3	30
N-Nitrosopyrrolidine		3.81		ng/l	3.00	127	50-150	1	30
N-Nitrosopiperidine		3.24		ng/l	3.00	108	50-150	2	30
N-Nitrosodi-n-butylamine		2.60		ng/l	3.00	87	50-150	5	30

Weck Laboratories, Inc. 14859 East Clark Avenue City of Industry, California 91745-1189 (626) 336-2139 FAX (626) 336-2634
www.weclabs.com

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WECK LABORATORIES, INC.
Analytical Laboratory Service - Since 1964

Certificate of Analysis

Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Authorized Signature
Contact: Kim G Tu
(Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity
NR	Not Reportable

5D24019 Page 3 of 3

Weck Laboratories, Inc. 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
www.wecklabs.com

Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/15/2015 15:57 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A02	The difference between duplicate readings is less than the quantitation limit.
A03	The sample concentration is more than 4 times the spike level.
A07	Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

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Date of Report: 05/13/2015

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 2nd Qtr. 2015
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1509842
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 4/23/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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

Chain of Custody Form

*Required Fields

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Report To: Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:*(614) 792 - 2897 Fax#: (614) 792- 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-09842

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)	Notes
-1	TB-4-4/23/15	4-23-15	0600	AQ	X									
-2	EB-4-4/23/15		0615		X	X	X	X	X	X				
-3	MW-22-5		0645		X	X	X	X	X	X				
-4	MW-22-4		0725		X	X	X	X	X	X				
-5	DUP-3-2Q15		0735		X	X	X	X	X	X				
-6	MW-22-3		0810		X	X	X	X	X	X				
-7	MW-22-2		0845		X	X	X	X	X	X				
-8	MW-22-1		0920		X	X	X	X	X	X				
-9	MW-25-5		1010		X	X	X	X	X	X				
-10	MW-25-4		1050		X	X	X	X	X	X				
-11	MW-25-3		1130		X	X	X	X	X	X				

Notes

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

MS/MSD

CHK BY DISTRIBUTION
SUB-OUT ☐

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

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

Lab TAT Approval: _____ *Additional Charges May Apply

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By:	4-23-15	1540	1. Received By:	4/23/15	1540
2. Relinquished By:	4/23/15	1604	2. Received By:	4-23-15	1605
3. Relinquished By:	4-23-14	1940	3. Received By:	4-23-15	1940

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.

Chain of Custody Form

*Required Fields

Page 2 of 2

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Street Address:* 3761 Attucks Drive
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Phone#:*(614) 792 - 2897 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-09842

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)		Notes
-12	MW-25-2	4-23-15	1220	AQ	X	X	X	X	X	X					MS/MSD
-13	MW-25-1	↓	1250	↓	X	X	X	X	X	X					
-14	DUP-4-2015		1140		X	X	X	X	X	X					
-15	MW-26-2		1340		X	X	X	X	X	X					MS/MSD
-16	MW-26-1	↓	1415	↓	X	X	X	X	X	X					

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

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

Lab TAT Approval: _____ *Additional Charges May Apply

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By: [signature]	4-23-15	1540	1.Received By: [signature]	4/23/15	1640
2. Relinquished By: [signature]	4/23/15	1604	2.Received By: [signature]	4-23-15	1610
3. Relinquished By: [signature]	4-23-14	1940	3.Received By: [signature]	4-23-15	1940

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 and Cooler Receipt Form for 1509842 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 1

Submission #: 15-09842

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4/23/15
Temperature: (A) 1.4 °C / (C) 1.6 °C Analyst Init KIB 2031

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL				D				D		
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS				E				E		
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		ABC	ABC	ABC	ABC	ABC	AF	ABC	ABC	ABC
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By: M Date/Time: 4/23/15 2120 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1509842 Page 4 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 2 Of 4

Submission #: 15-09842

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4/23/15

Temperature: (A) 1.4 °C / (C) 1.6 °C Analyst Init KIB 2031

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABC	A-F	ABC	ABC	AF	ABC				
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By: M Date/Time: 4/23/15 2120 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1509842 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 3 Of 4

Submission #: 15-09842

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4/23/15
Temperature: (A) 1.2 °C / (C) 1.4 °C Analyst Init KIB 2021

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	#2	#3	#5	#6	#7	#9	#10	#11	#12	#13
QT GENERAL MINERAL/ GENERAL	D	D	D	D	G	D	D	D	G	D
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	E	E	E	E	H	E	E	E	H	E
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: [signature] Date/Time: 4.23.15 2140 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1509842 Page 6 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 4 Of 4

Submission #: 15-09842

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4/23/15

Temperature: (A) 1.2 °C / (C) 1.4 °C Analyst Init KIB 2021

SAMPLE CONTAINERS	SAMPLE NUMBERS 14	15	16	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL	D	G	D							
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	E	H	E							
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By: M Date/Time: 4-23-15 2410 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509842-01	**COC Number:**	---	**Receive Date:**	04/23/2015 19:14
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 06:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-4-4/23/15	**Lab Matrix:**	Water
	Sampled By:	BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-4-4/23/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509842-02	**COC Number:**	---	**Receive Date:**	04/23/2015 19:14
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 06:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-4-4/23/15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-4-4/23/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509842-03	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 06:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-22-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509842-04	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 07:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-22-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509842-05	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 07:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-3-2Q15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-3-2Q15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509842-06	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 08:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-22-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509842-07	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 08:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-22-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509842-08	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 09:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-22-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509842-09	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 10:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			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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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509842-10	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 10:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-25-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509842-11	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 11:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-25-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509842-12	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 12:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			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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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509842-13	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 12:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-25-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509842-14	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 11:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-4-2Q15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-4-2Q15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509842-15	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 13:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-26-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-26-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509842-16	**COC Number:**	---	**Receive Date:**	04/23/2015 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2015 14:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-26-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Blank Water
			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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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-01 | **Client Sample Name:** JPL-GW, TB-4-4/23/15, 4/23/2015 6:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-01 | **Client Sample Name:** JPL-GW, TB-4-4/23/15, 4/23/2015 6:00:00AM

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-01 | **Client Sample Name:** JPL-GW, TB-4-4/23/15, 4/23/2015 6:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.2	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/24/15	04/24/15 12:13	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-01 | **Client Sample Name:** JPL-GW, TB-4-4/23/15, 4/23/2015 6:00:00AM

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	04/24/15	04/24/15 12:13	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-02 | **Client Sample Name:** JPL-GW, EB-4-4/23/15, 4/23/2015 6:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-02 | **Client Sample Name:** JPL-GW, EB-4-4/23/15, 4/23/2015 6:15:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-02 | **Client Sample Name:** JPL-GW, EB-4-4/23/15, 4/23/2015 6:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/24/15	04/24/15 12:35	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-02 | **Client Sample Name:** JPL-GW, EB-4-4/23/15, 4/23/2015 6:15:00AM, 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	04/24/15	04/24/15 12:35	MGC	MS-V5	1	BYD2113

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-02 | **Client Sample Name:** JPL-GW, EB-4-4/23/15, 4/23/2015 6:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	**0.037**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND	**J**	1
Total Recoverable Sodium	**0.16**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.022	**J**	1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.14**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND	**J**	3
Nitrate as N	**0.023**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**0.29**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND	**J**	3
pH	**5.14**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	04/30/15 14:08	JRG	PE-OP2	1	BYD2640
2	SM-2320B	04/27/15	04/27/15 18:00	RML	MET-1	1	BYD2292
3	EPA-300.0	04/24/15	04/24/15 10:40	OLH	IC5	1	BYD2151
4	EPA-150.1	04/27/15	04/27/15 18:00	RML	MET-1	1	BYD2292
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	0.667	BYD2432
6	EPA-353.2	04/24/15	04/24/15 08:37	TDC	KONE-1	1	BYD2191
7	EPA-314.0	05/04/15	05/04/15 17:29	BMW	IC6	1	BYE0280

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-02 | **Client Sample Name:** JPL-GW, EB-4-4/23/15, 4/23/2015 6:15:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**93**	**ug/L**	**50**	**6.5**	**EPA-200.7**	37		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:04	BMW	KONE-1	1	BYD2195
2	EPA-200.8	04/30/15	04/30/15 17:13	SRM	PE-EL2	1	BYD2643
3	EPA-200.7	04/30/15	04/30/15 14:08	JRG	PE-OP2	1	BYD2640

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/23/2015 6:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/23/2015 6:45:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/23/2015 6:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.9	%	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	04/24/15	04/24/15 12:58	MGC	MS-V5	1	BYD2113

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/23/2015 6:45:00AM, 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	04/24/15	04/24/15 12:58	MGC	MS-V5	1	BYD2113

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/23/2015 6:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**5.0**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**1.3**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**71**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.022		1
Total Recoverable Potassium	**0.79**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND	**J**	1
Bicarbonate	**82**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**20**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**100**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**7.2**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		4
Sulfate	**40**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**9.12**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	5
Total Dissolved Solids @ 180 C	**230**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		6
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		7
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	04/30/15 14:10	JRG	PE-OP2	1	BYD2640
2	SM-2320B	04/27/15	04/27/15 19:02	RML	MET-1	1	BYD2292
3	EPA-300.0	05/10/15	05/10/15 10:04	BMW	IC2	1	BYE0826
4	EPA-300.0	04/24/15	04/24/15 10:58	OLH	IC5	1	BYD2151
5	EPA-150.1	04/27/15	04/27/15 19:02	RML	MET-1	1	BYD2292
6	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	2	BYD2432
7	EPA-353.2	04/24/15	04/24/15 08:37	TDC	KONE-1	1	BYD2191
8	EPA-314.0	05/04/15	05/04/15 17:43	BMW	IC6	1	BYE0280

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/23/2015 6:45:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**58**	**ug/L**	**50**	**6.5**	**EPA-200.7**	37		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:04	BMW	KONE-1	1	BYD2195
2	EPA-200.8	04/30/15	04/30/15 17:16	SRM	PE-EL2	1	BYD2643
3	EPA-200.7	04/30/15	04/30/15 14:10	JRG	PE-OP2	1	BYD2640

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/23/2015 7:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/23/2015 7:25:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/23/2015 7:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.1	%	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	04/24/15	04/24/15 13:21	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/23/2015 7:25:00AM, 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	04/24/15	04/24/15 13:21	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/23/2015 7:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**34**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**11**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**29**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.022		1
Total Recoverable Potassium	**1.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**180**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**150**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**12**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**4.2**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**10**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.25**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**240**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	04/30/15 14:13	JRG	PE-OP2	1	BYD2640
2	SM-2320B	04/27/15	04/27/15 19:09	RML	MET-1	1	BYD2292
3	EPA-300.0	04/24/15	04/24/15 11:15	OLH	IC5	1	BYD2151
4	EPA-150.1	04/27/15	04/27/15 19:09	RML	MET-1	1	BYD2292
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	2	BYD2432
6	EPA-353.2	04/24/15	04/24/15 08:37	TDC	KONE-1	1	BYD2191
7	EPA-314.0	05/04/15	05/04/15 17:57	BMW	IC6	1	BYE0280

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/23/2015 7:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0012**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**1.1**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.0**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**75**	**ug/L**	**50**	**6.5**	**EPA-200.7**	37		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:04	BMW	KONE-1	1	BYD2195
2	EPA-200.8	04/30/15	04/30/15 17:19	SRM	PE-EL2	1	BYD2643
3	EPA-200.7	04/30/15	04/30/15 14:13	JRG	PE-OP2	1	BYD2640

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-05 | **Client Sample Name:** JPL-GW, DUP-3-2Q15, 4/23/2015 7:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-05 | **Client Sample Name:** JPL-GW, DUP-3-2Q15, 4/23/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-05 | **Client Sample Name:** JPL-GW, DUP-3-2Q15, 4/23/2015 7:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/24/15	04/24/15 13:44	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-05 | **Client Sample Name:** JPL-GW, DUP-3-2Q15, 4/23/2015 7:35:00AM, 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	04/24/15	04/24/15 13:44	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-05 | **Client Sample Name:** JPL-GW, DUP-3-2Q15, 4/23/2015 7:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**35**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**12**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**29**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.022		1
Total Recoverable Potassium	**1.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**180**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**150**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**12**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**4.2**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**10**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.28**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**240**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	04/30/15 14:16	JRG	PE-OP2	1	BYD2640
2	SM-2320B	04/27/15	04/27/15 19:16	RML	MET-1	1	BYD2292
3	EPA-300.0	04/24/15	04/24/15 11:33	OLH	IC5	1	BYD2151
4	EPA-150.1	04/27/15	04/27/15 19:16	RML	MET-1	1	BYD2292
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	2	BYD2432
6	EPA-353.2	04/24/15	04/24/15 08:37	TDC	KONE-1	1	BYD2191
7	EPA-314.0	05/04/15	05/04/15 18:10	BMW	IC6	1	BYE0280

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-05 | **Client Sample Name:** JPL-GW, DUP-3-2Q15, 4/23/2015 7:35:00AM, 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 Arsenic	**1.2**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.7**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**67**	**ug/L**	**50**	**6.5**	**EPA-200.7**	37		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:04	BMW	KONE-1	1	BYD2195
2	EPA-200.8	04/30/15	04/30/15 17:22	SRM	PE-EL2	1	BYD2643
3	EPA-200.7	04/30/15	04/30/15 14:16	JRG	PE-OP2	1	BYD2640

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-06 | **Client Sample Name:** JPL-GW, MW-22-3, 4/23/2015 8:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-06 | **Client Sample Name:** JPL-GW, MW-22-3, 4/23/2015 8:10:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-06 | **Client Sample Name:** JPL-GW, MW-22-3, 4/23/2015 8:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.7	%	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	04/24/15	04/24/15 14:06	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-06 | **Client Sample Name:** JPL-GW, MW-22-3, 4/23/2015 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	04/24/15	04/24/15 14:06	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-06 | **Client Sample Name:** JPL-GW, MW-22-3, 4/23/2015 8:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**44**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**15**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**34**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.022		1
Total Recoverable Potassium	**1.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**22**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**6.4**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**22**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.32**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**300**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**1.9**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	04/30/15 14:18	JRG	PE-OP2	1	BYD2640
2	SM-2320B	04/27/15	04/27/15 19:22	RML	MET-1	1	BYD2292
3	EPA-300.0	04/24/15	04/24/15 12:25	OLH	IC5	1	BYD2151
4	EPA-150.1	04/27/15	04/27/15 19:22	RML	MET-1	1	BYD2292
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	2	BYD2432
6	EPA-353.2	04/24/15	04/24/15 08:42	TDC	KONE-1	1	BYD2191
7	EPA-314.0	05/04/15	05/04/15 18:24	BMW	IC6	1	BYE0280

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-06 | **Client Sample Name:** JPL-GW, MW-22-3, 4/23/2015 8:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0013**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**1.3**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.4**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**95**	**ug/L**	**50**	**6.5**	**EPA-200.7**	37		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:11	BMW	KONE-1	1	BYD2195
2	EPA-200.8	04/30/15	04/30/15 17:25	SRM	PE-EL2	1	BYD2643
3	EPA-200.7	04/30/15	04/30/15 14:18	JRG	PE-OP2	1	BYD2640

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-07 | **Client Sample Name:** JPL-GW, MW-22-2, 4/23/2015 8:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-07 | **Client Sample Name:** JPL-GW, MW-22-2, 4/23/2015 8:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.14**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	**10**	**ug/L**	**10**	**4.6**	**EPA-524.2**	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-07 | **Client Sample Name:** JPL-GW, MW-22-2, 4/23/2015 8:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.0	%	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	04/24/15	04/24/15 08:48	MGC	MS-V5	1	BYD2113

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-07 | **Client Sample Name:** JPL-GW, MW-22-2, 4/23/2015 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	04/24/15	04/24/15 08:48	MGC	MS-V5	1	BYD2113

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-07 | **Client Sample Name:** JPL-GW, MW-22-2, 4/23/2015 8:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**60**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**25**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**33**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.022		1
Total Recoverable Potassium	**2.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**220**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**48**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**8.3**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**46**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.22**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**400**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.0**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	04/30/15 13:10	JRG	PE-OP2	1	BYD2640
2	SM-2320B	04/27/15	04/27/15 19:48	RML	MET-1	1	BYD2293
3	EPA-300.0	04/24/15	04/24/15 09:31	OLH	IC5	1	BYD2151
4	EPA-150.1	04/27/15	04/27/15 19:48	RML	MET-1	1	BYD2293
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	2	BYD2432
6	EPA-353.2	04/24/15	04/24/15 08:37	TDC	KONE-1	1	BYD2191
7	EPA-314.0	05/04/15	05/04/15 17:15	BMW	IC6	1	BYE0280

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-07 | **Client Sample Name:** JPL-GW, MW-22-2, 4/23/2015 8:45:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.00092**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**1.1**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.7**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**180**	**ug/L**	**50**	**6.5**	**EPA-200.7**	37		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:04	BMW	KONE-1	1	BYD2195
2	EPA-200.8	04/30/15	04/30/15 16:34	SRM	PE-EL2	1	BYD2643
3	EPA-200.7	04/30/15	04/30/15 16:50	JRG	PE-OP2	1	BYD2640

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-08 | **Client Sample Name:** JPL-GW, MW-22-1, 4/23/2015 9:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.35**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-08 | **Client Sample Name:** JPL-GW, MW-22-1, 4/23/2015 9:20:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.5**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-08 | **Client Sample Name:** JPL-GW, MW-22-1, 4/23/2015 9:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/24/15	04/24/15 14:29	MGC	MS-V5	1	BYD2113

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-08 | **Client Sample Name:** JPL-GW, MW-22-1, 4/23/2015 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	04/24/15	04/24/15 14:29	MGC	MS-V5	1	BYD2113

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-08 | **Client Sample Name:** JPL-GW, MW-22-1, 4/23/2015 9:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**150**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**54**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**36**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.022		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**290**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**240**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**120**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND	**A07**	3
Nitrate as N	**12**	**mg/L**	**0.20**	**0.036**	**EPA-300.0**	ND	**A07**	3
Sulfate	**180**	**mg/L**	**2.0**	**0.20**	**EPA-300.0**	ND	**A07**	3
pH	**7.88**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**780**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.1**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	04/30/15 14:21	JRG	PE-OP2	1	BYD2640
2	SM-2320B	04/27/15	04/27/15 20:01	RML	MET-1	2	BYD2293
3	EPA-300.0	04/24/15	04/24/15 12:42	OLH	IC5	2	BYD2151
4	EPA-150.1	04/27/15	04/27/15 20:01	RML	MET-1	1	BYD2293
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	5	BYD2432
6	EPA-353.2	04/24/15	04/24/15 08:42	TDC	KONE-1	1	BYD2191
7	EPA-314.0	05/04/15	05/04/15 21:57	BMW	IC6	1	BYE0280

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-08 | **Client Sample Name:** JPL-GW, MW-22-1, 4/23/2015 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**550**	**ug/L**	**50**	**6.5**	**EPA-200.7**	37		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:11	BMW	KONE-1	1	BYD2195
2	EPA-200.8	04/30/15	04/30/15 17:28	SRM	PE-EL2	1	BYD2643
3	EPA-200.7	04/30/15	04/30/15 14:21	JRG	PE-OP2	1	BYD2640

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-09 | **Client Sample Name:** JPL-GW, MW-25-5, 4/23/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-09 | **Client Sample Name:** JPL-GW, MW-25-5, 4/23/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-09 | **Client Sample Name:** JPL-GW, MW-25-5, 4/23/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	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	04/24/15	04/24/15 14:52	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-09 | **Client Sample Name:** JPL-GW, MW-25-5, 4/23/2015 10:10:00AM, 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	04/24/15	04/24/15 14:52	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-09 | **Client Sample Name:** JPL-GW, MW-25-5, 4/23/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**5.4**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**4.3**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**65**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**83**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**8.6**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**82**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**15**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**57**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.92**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**260**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 17:29	JRG	PE-OP2	1	BYE0001
2	SM-2320B	04/27/15	04/27/15 20:10	RML	MET-1	1	BYD2293
3	EPA-300.0	04/24/15	04/24/15 13:00	OLH	IC5	1	BYD2151
4	EPA-150.1	04/27/15	04/27/15 20:10	RML	MET-1	1	BYD2293
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	2	BYD2432
6	EPA-353.2	04/24/15	04/24/15 08:42	TDC	KONE-1	1	BYD2191
7	EPA-314.0	05/04/15	05/04/15 22:10	BMW	IC6	1	BYE0280

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-09 | **Client Sample Name:** JPL-GW, MW-25-5, 4/23/2015 10:10:00AM, 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 Arsenic	**2.1**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**0.51**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**56**	**ug/L**	**50**	**6.5**	**EPA-200.7**	15		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:11	BMW	KONE-1	1	BYD2195
2	EPA-200.8	04/30/15	04/30/15 17:31	SRM	PE-EL2	1	BYD2643
3	EPA-200.7	04/30/15	05/04/15 17:29	JRG	PE-OP2	1	BYE0001

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-10 | **Client Sample Name:** JPL-GW, MW-25-4, 4/23/2015 10:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-10 | **Client Sample Name:** JPL-GW, MW-25-4, 4/23/2015 10:50:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-10 | **Client Sample Name:** JPL-GW, MW-25-4, 4/23/2015 10:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.2	%	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	04/24/15	04/24/15 15:14	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-10 | **Client Sample Name:** JPL-GW, MW-25-4, 4/23/2015 10:50:00AM, 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	04/24/15	04/24/15 15:14	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-10 | **Client Sample Name:** JPL-GW, MW-25-4, 4/23/2015 10:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**81**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**25**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**48**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.4**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**270**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**220**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**54**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**6.0**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**80**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.85**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**460**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**9.3**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 17:42	JRG	PE-OP2	1	BYE0001
2	SM-2320B	04/27/15	04/27/15 20:17	RML	MET-1	1	BYD2293
3	EPA-300.0	04/24/15	04/24/15 13:17	OLH	IC5	1	BYD2151
4	EPA-150.1	04/27/15	04/27/15 20:17	RML	MET-1	1	BYD2293
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	3.333	BYD2432
6	EPA-353.2	04/24/15	04/24/15 08:42	TDC	KONE-1	1	BYD2191
7	EPA-314.0	05/06/15	05/06/15 08:11	OLH	IC6	1	BYE0556

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-10 | **Client Sample Name:** JPL-GW, MW-25-4, 4/23/2015 10:50:00AM, 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 Arsenic	**0.96**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.5**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**200**	**ug/L**	**50**	**6.5**	**EPA-200.7**	15		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:11	BMW	KONE-1	1	BYD2195
2	EPA-200.8	04/30/15	04/30/15 17:35	SRM	PE-EL2	1	BYD2643
3	EPA-200.7	04/30/15	05/04/15 17:42	JRG	PE-OP2	1	BYE0001

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-11 | **Client Sample Name:** JPL-GW, MW-25-3, 4/23/2015 11:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.55**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-11 | **Client Sample Name:** JPL-GW, MW-25-3, 4/23/2015 11:30:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.40**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-11 | **Client Sample Name:** JPL-GW, MW-25-3, 4/23/2015 11:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.8	%	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	04/24/15	04/24/15 15:37	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-11 | **Client Sample Name:** JPL-GW, MW-25-3, 4/23/2015 11:30:00AM, 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	04/24/15	04/24/15 15:37	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-11 | **Client Sample Name:** JPL-GW, MW-25-3, 4/23/2015 11:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**84**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**27**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**37**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**47**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**8.2**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**74**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.74**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**460**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**10**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 17:44	JRG	PE-OP2	1	BYE0001
2	SM-2320B	04/27/15	04/27/15 20:25	RML	MET-1	1	BYD2293
3	EPA-300.0	04/24/15	04/24/15 13:34	OLH	IC5	1	BYD2151
4	EPA-150.1	04/27/15	04/27/15 20:25	RML	MET-1	1	BYD2293
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	3.333	BYD2432
6	EPA-353.2	04/24/15	04/24/15 08:42	TDC	KONE-1	1	BYD2191
7	EPA-314.0	05/05/15	05/05/15 09:13	OLH	IC6	1	BYE0290

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-11 | **Client Sample Name:** JPL-GW, MW-25-3, 4/23/2015 11:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0019**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**0.72**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**3.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**61**	**ug/L**	**50**	**6.5**	**EPA-200.7**	15		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:23	BMW	KONE-1	1	BYD2195
2	EPA-200.8	04/30/15	04/30/15 17:38	SRM	PE-EL2	1	BYD2643
3	EPA-200.7	04/30/15	05/04/15 17:44	JRG	PE-OP2	1	BYE0001

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-12 | **Client Sample Name:** JPL-GW, MW-25-2, 4/23/2015 12:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-12 | **Client Sample Name:** JPL-GW, MW-25-2, 4/23/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.27**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-12 | **Client Sample Name:** JPL-GW, MW-25-2, 4/23/2015 12:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	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	04/24/15	04/24/15 17:08	MGC	MS-V5	1	BYD2199

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-12 | **Client Sample Name:** JPL-GW, MW-25-2, 4/23/2015 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	04/24/15	04/24/15 17:08	MGC	MS-V5	1	BYD2199

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-12 | **Client Sample Name:** JPL-GW, MW-25-2, 4/23/2015 12:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**81**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**29**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**33**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**50**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**8.7**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**82**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.52**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**490**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**14**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 17:14	JRG	PE-OP2	1	BYE0001
2	SM-2320B	04/27/15	04/27/15 20:34	RML	MET-1	1	BYD2293
3	EPA-300.0	04/24/15	04/24/15 14:27	OLH	IC5	1	BYD2152
4	EPA-150.1	04/27/15	04/27/15 20:34	RML	MET-1	1	BYD2293
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	3.333	BYD2433
6	EPA-353.2	04/24/15	04/24/15 08:42	TDC	KONE-1	1	BYD2192
7	EPA-314.0	05/05/15	05/05/15 09:00	OLH	IC6	1	BYE0290

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-12 | **Client Sample Name:** JPL-GW, MW-25-2, 4/23/2015 12:20:00PM, Blaine Tech

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 Arsenic	**0.97**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.6**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.55	**J**	2
Total Recoverable Iron	**71**	**ug/L**	**50**	**6.5**	**EPA-200.7**	15		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:11	BMW	KONE-1	1	BYD2197
2	EPA-200.8	04/30/15	05/01/15 12:22	EAR	PE-EL2	1	BYE0002
3	EPA-200.7	04/30/15	05/04/15 17:14	JRG	PE-OP2	1	BYE0001

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-13 | **Client Sample Name:** JPL-GW, MW-25-1, 4/23/2015 12:50:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.47**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-13 | **Client Sample Name:** JPL-GW, MW-25-1, 4/23/2015 12:50:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	**0.33**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.7**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-13 | **Client Sample Name:** JPL-GW, MW-25-1, 4/23/2015 12:50:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.0	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/24/15	04/24/15 16:00	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-13 | **Client Sample Name:** JPL-GW, MW-25-1, 4/23/2015 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	04/24/15	04/24/15 16:00	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-13 | **Client Sample Name:** JPL-GW, MW-25-1, 4/23/2015 12:50:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**98**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**34**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**37**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**230**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**68**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**9.0**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**130**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**6.99**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**550**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**9.3**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 17:47	JRG	PE-OP2	1	BYE0001
2	SM-2320B	04/27/15	04/27/15 20:44	RML	MET-1	2	BYD2293
3	EPA-300.0	04/24/15	04/24/15 16:11	BMW	IC5	1	BYD2152
4	EPA-150.1	04/27/15	04/27/15 20:44	RML	MET-1	1	BYD2293
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	3.333	BYD2433
6	EPA-353.2	04/24/15	04/24/15 08:47	TDC	KONE-1	1	BYD2192
7	EPA-314.0	05/05/15	05/05/15 09:27	OLH	IC6	1	BYE0290

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-13 | **Client Sample Name:** JPL-GW, MW-25-1, 4/23/2015 12:50:00PM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.91**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.55	**J**	2
Total Recoverable Iron	**550**	**ug/L**	**50**	**6.5**	**EPA-200.7**	15		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:17	BMW	KONE-1	1	BYD2197
2	EPA-200.8	04/30/15	05/05/15 03:40	EAR	PE-EL2	1	BYE0002
3	EPA-200.7	04/30/15	05/04/15 17:47	JRG	PE-OP2	1	BYE0001

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-14 | **Client Sample Name:** JPL-GW, DUP-4-2Q15, 4/23/2015 11:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.62**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-14 | **Client Sample Name:** JPL-GW, DUP-4-2Q15, 4/23/2015 11:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-14 | **Client Sample Name:** JPL-GW, DUP-4-2Q15, 4/23/2015 11:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	92.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/24/15	04/24/15 16:23	MGC	MS-V5	1	BYD2113

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-14 | **Client Sample Name:** JPL-GW, DUP-4-2Q15, 4/23/2015 11:40:00AM, 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	04/24/15	04/24/15 16:23	MGC	MS-V5	1	BYD2113

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-14 | **Client Sample Name:** JPL-GW, DUP-4-2Q15, 4/23/2015 11:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**86**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**28**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**38**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**49**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**8.0**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**76**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.25**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**450**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**11**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/15	05/04/15 17:49	JRG	PE-OP2	1	BYE0001
2	SM-2320B	04/27/15	04/27/15 20:54	RML	MET-1	1	BYD2293
3	EPA-300.0	04/24/15	04/24/15 16:28	BMW	IC5	1	BYD2152
4	EPA-150.1	04/27/15	04/27/15 20:54	RML	MET-1	1	BYD2293
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	3.333	BYD2433
6	EPA-353.2	04/24/15	04/24/15 08:47	TDC	KONE-1	1	BYD2192
7	EPA-314.0	05/05/15	05/05/15 09:41	OLH	IC6	1	BYE0290

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-14 | **Client Sample Name:** JPL-GW, DUP-4-2Q15, 4/23/2015 11:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0019**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.7**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.55	**J**	2
Total Recoverable Iron	**46**	**ug/L**	**50**	**6.5**	**EPA-200.7**	15	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:17	BMW	KONE-1	1	BYD2197
2	EPA-200.8	04/30/15	05/05/15 03:44	EAR	PE-EL2	1	BYE0002
3	EPA-200.7	04/30/15	05/04/15 17:49	JRG	PE-OP2	1	BYE0001

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-15 | **Client Sample Name:** JPL-GW, MW-26-2, 4/23/2015 1:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.85**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-15 | **Client Sample Name:** JPL-GW, MW-26-2, 4/23/2015 1:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.1**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.15**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND	V11	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-15 | **Client Sample Name:** JPL-GW, MW-26-2, 4/23/2015 1:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.6	%	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	04/27/15	04/27/15 07:41	MGC	MS-V5	1	BYD2251

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-15 | **Client Sample Name:** JPL-GW, MW-26-2, 4/23/2015 1:40:00PM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/27/15	04/27/15 07:41	MGC	MS-V5	1	BYD2251

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-15 | **Client Sample Name:** JPL-GW, MW-26-2, 4/23/2015 1:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**54**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**32**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.021		1
Total Recoverable Sodium	**43**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.056		1
Total Recoverable Potassium	**3.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**180**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**150**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**63**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**3.0**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**71**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.24**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**450**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	**2.1**	**mg/L**	**0.25**	**0.060**	**EPA-353.2**	ND	**A07**	6
Perchlorate	**2.6**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/04/15 20:27	JRG	PE-OP2	1	BYE0053
2	SM-2320B	04/27/15	04/27/15 21:06	RML	MET-1	1	BYD2293
3	EPA-300.0	04/24/15	04/24/15 16:46	BMW	IC5	1	BYD2152
4	EPA-150.1	04/27/15	04/27/15 21:06	RML	MET-1	1	BYD2293
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	2	BYD2433
6	EPA-353.2	04/24/15	04/24/15 08:47	TDC	KONE-1	5	BYD2194
7	EPA-314.0	05/05/15	05/05/15 10:23	OLH	IC6	1	BYE0291

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-15 | **Client Sample Name:** JPL-GW, MW-26-2, 4/23/2015 1:40:00PM, Blaine Tech

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 Arsenic	**1.2**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.79**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**1000**	**ug/L**	**50**	**6.5**	**EPA-200.7**	33		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:17	BMW	KONE-1	1	BYD2197
2	EPA-200.8	05/01/15	05/04/15 23:02	EAR	PE-EL2	1	BYE0050
3	EPA-200.7	05/01/15	05/06/15 14:56	JRG	PE-OP2	1	BYE0053

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-16 | **Client Sample Name:** JPL-GW, MW-26-1, 4/23/2015 2:15:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.24**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-16 | **Client Sample Name:** JPL-GW, MW-26-1, 4/23/2015 2:15:00PM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.66**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.26**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND	V11	1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509842-16 | **Client Sample Name:** JPL-GW, MW-26-1, 4/23/2015 2:15:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.7	%	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	04/27/15	04/27/15 08:04	MGC	MS-V5	1	BYD2251

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509842-16 | **Client Sample Name:** JPL-GW, MW-26-1, 4/23/2015 2:15:00PM, 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	04/27/15	04/27/15 08:04	MGC	MS-V5	1	BYD2251

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509842-16 | **Client Sample Name:** JPL-GW, MW-26-1, 4/23/2015 2:15:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**110**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**40**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.021		1
Total Recoverable Sodium	**35**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.056		1
Total Recoverable Potassium	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**260**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**220**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**75**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**6.1**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**110**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**6.73**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**560**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	**1.2**	**mg/L**	**0.25**	**0.060**	**EPA-353.2**	ND	**A07**	6
Perchlorate	**2.9**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/04/15 20:42	JRG	PE-OP2	1	BYE0053
2	SM-2320B	04/27/15	04/27/15 21:14	RML	MET-1	2	BYD2293
3	EPA-300.0	04/24/15	04/24/15 17:03	BMW	IC5	1	BYD2152
4	EPA-150.1	04/27/15	04/27/15 21:14	RML	MET-1	1	BYD2293
5	EPA-160.1	04/28/15	04/28/15 14:00	CAD	MANUAL	3.333	BYD2433
6	EPA-353.2	04/24/15	04/24/15 08:54	TDC	KONE-1	5	BYD2192
7	EPA-314.0	05/05/15	05/05/15 09:55	OLH	IC6	1	BYE0290

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509842-16 | **Client Sample Name:** JPL-GW, MW-26-1, 4/23/2015 2:15:00PM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**6300**	**ug/L**	**50**	**6.5**	**EPA-200.7**	33		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 00:51	BMW	KONE-1	1	BYD2197
2	EPA-200.8	05/01/15	05/05/15 01:22	EAR	PE-EL2	1	BYE0050
3	EPA-200.7	05/01/15	05/06/15 15:16	JRG	PE-OP2	1	BYE0053

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2113						
Benzene	BYD2113-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYD2113-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYD2113-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYD2113-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYD2113-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYD2113-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYD2113-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYD2113-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYD2113-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYD2113-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYD2113-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYD2113-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYD2113-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYD2113-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYD2113-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYD2113-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYD2113-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYD2113-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYD2113-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYD2113-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYD2113-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYD2113-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYD2113-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYD2113-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYD2113-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYD2113-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYD2113-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYD2113-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYD2113-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYD2113-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYD2113-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYD2113-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYD2113-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYD2113-BLK1	ND	ug/L	0.50	0.14	

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2113						
trans-1,3-Dichloropropene	BYD2113-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYD2113-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYD2113-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYD2113-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYD2113-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYD2113-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BYD2113-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYD2113-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYD2113-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYD2113-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYD2113-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYD2113-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYD2113-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYD2113-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYD2113-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYD2113-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYD2113-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYD2113-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYD2113-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYD2113-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYD2113-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYD2113-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYD2113-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYD2113-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYD2113-BLK1	ND	ug/L	0.50	0.12	
Acetone	BYD2113-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BYD2113-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BYD2113-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BYD2113-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BYD2113-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BYD2113-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BYD2113-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BYD2113-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BYD2113-BLK1	ND	ug/L	4.0	0.97	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2113						
Ethyl t-butyl ether	BYD2113-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BYD2113-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BYD2113-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BYD2113-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BYD2113-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BYD2113-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BYD2113-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BYD2113-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BYD2113-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BYD2113-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BYD2113-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BYD2113-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYD2113-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYD2113-BLK1**	**97.1**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYD2113-BLK1**	**100**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYD2113-BLK1**	**99.9**	%	**80 - 120 (LCL - UCL)**		
QC Batch ID: BYD2199						
Benzene	BYD2199-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYD2199-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYD2199-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYD2199-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYD2199-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYD2199-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYD2199-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYD2199-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYD2199-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYD2199-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYD2199-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYD2199-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYD2199-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYD2199-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYD2199-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYD2199-BLK1	ND	ug/L	0.50	0.15	

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2199						
Dibromochloromethane	BYD2199-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYD2199-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYD2199-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYD2199-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYD2199-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYD2199-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYD2199-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYD2199-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYD2199-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYD2199-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYD2199-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYD2199-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYD2199-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYD2199-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYD2199-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYD2199-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYD2199-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYD2199-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	BYD2199-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYD2199-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYD2199-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYD2199-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYD2199-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYD2199-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BYD2199-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYD2199-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYD2199-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYD2199-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYD2199-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYD2199-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYD2199-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYD2199-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYD2199-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYD2199-BLK1	ND	ug/L	0.50	0.19	

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2199						
1,1,1-Trichloroethane	BYD2199-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYD2199-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYD2199-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYD2199-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYD2199-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYD2199-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYD2199-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYD2199-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYD2199-BLK1	ND	ug/L	0.50	0.12	
Acetone	BYD2199-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BYD2199-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BYD2199-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BYD2199-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BYD2199-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BYD2199-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BYD2199-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BYD2199-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BYD2199-BLK1	ND	ug/L	4.0	0.97	
Ethyl t-butyl ether	BYD2199-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BYD2199-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BYD2199-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BYD2199-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BYD2199-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BYD2199-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BYD2199-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BYD2199-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BYD2199-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BYD2199-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BYD2199-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BYD2199-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYD2199-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYD2199-BLK1**	**96.5**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYD2199-BLK1**	**100**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYD2199-BLK1**	**93.7**	%	**80 - 120 (LCL - UCL)**		

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2251						
Benzene	BYD2251-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYD2251-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYD2251-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYD2251-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYD2251-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYD2251-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYD2251-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYD2251-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYD2251-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYD2251-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYD2251-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYD2251-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYD2251-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYD2251-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYD2251-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYD2251-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYD2251-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYD2251-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYD2251-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYD2251-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYD2251-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYD2251-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYD2251-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYD2251-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYD2251-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYD2251-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYD2251-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYD2251-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYD2251-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYD2251-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYD2251-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYD2251-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYD2251-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYD2251-BLK1	ND	ug/L	0.50	0.14	

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2251						
trans-1,3-Dichloropropene	BYD2251-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYD2251-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYD2251-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYD2251-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYD2251-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYD2251-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BYD2251-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYD2251-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYD2251-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYD2251-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYD2251-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYD2251-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYD2251-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYD2251-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYD2251-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYD2251-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYD2251-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYD2251-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYD2251-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYD2251-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYD2251-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYD2251-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYD2251-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYD2251-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYD2251-BLK1	ND	ug/L	0.50	0.12	
Acetone	BYD2251-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BYD2251-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BYD2251-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BYD2251-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BYD2251-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BYD2251-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BYD2251-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BYD2251-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BYD2251-BLK1	ND	ug/L	4.0	0.97	

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Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2251						
Ethyl t-butyl ether	BYD2251-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BYD2251-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BYD2251-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BYD2251-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BYD2251-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BYD2251-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BYD2251-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BYD2251-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BYD2251-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BYD2251-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BYD2251-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BYD2251-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYD2251-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYD2251-BLK1**	**94.7**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYD2251-BLK1**	**101**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYD2251-BLK1**	**102**	%	**80 - 120 (LCL - UCL)**		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2113										
Benzene	BYD2113-BS1	LCS	26.370	25.000	ug/L	105		70 - 130		
Bromodichloromethane	BYD2113-BS1	LCS	26.860	25.000	ug/L	107		70 - 130		
Chlorobenzene	BYD2113-BS1	LCS	27.740	25.000	ug/L	111		70 - 130		
Chloroethane	BYD2113-BS1	LCS	26.680	25.000	ug/L	107		70 - 130		
1,4-Dichlorobenzene	BYD2113-BS1	LCS	26.660	25.000	ug/L	107		70 - 130		
1,1-Dichloroethane	BYD2113-BS1	LCS	25.700	25.000	ug/L	103		70 - 130		
1,1-Dichloroethene	BYD2113-BS1	LCS	27.520	25.000	ug/L	110		70 - 130		
Toluene	BYD2113-BS1	LCS	26.910	25.000	ug/L	108		70 - 130		
Trichloroethene	BYD2113-BS1	LCS	28.580	25.000	ug/L	114		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYD2113-BS1	LCS	9.0800	10.000	ug/L	90.8		75 - 125		
Toluene-d8 (Surrogate)	BYD2113-BS1	LCS	10.360	10.000	ug/L	104		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYD2113-BS1	LCS	9.4400	10.000	ug/L	94.4		80 - 120		
QC Batch ID: BYD2199										
Benzene	BYD2199-BS1	LCS	23.780	25.000	ug/L	95.1		70 - 130		
Bromodichloromethane	BYD2199-BS1	LCS	25.600	25.000	ug/L	102		70 - 130		
Chlorobenzene	BYD2199-BS1	LCS	25.400	25.000	ug/L	102		70 - 130		
Chloroethane	BYD2199-BS1	LCS	24.210	25.000	ug/L	96.8		70 - 130		
1,4-Dichlorobenzene	BYD2199-BS1	LCS	25.150	25.000	ug/L	101		70 - 130		
1,1-Dichloroethane	BYD2199-BS1	LCS	23.190	25.000	ug/L	92.8		70 - 130		
1,1-Dichloroethene	BYD2199-BS1	LCS	25.130	25.000	ug/L	101		70 - 130		
Toluene	BYD2199-BS1	LCS	24.850	25.000	ug/L	99.4		70 - 130		
Trichloroethene	BYD2199-BS1	LCS	27.120	25.000	ug/L	108		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYD2199-BS1	LCS	9.4800	10.000	ug/L	94.8		75 - 125		
Toluene-d8 (Surrogate)	BYD2199-BS1	LCS	10.230	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYD2199-BS1	LCS	10.150	10.000	ug/L	102		80 - 120		
QC Batch ID: BYD2251										
Benzene	BYD2251-BS1	LCS	24.040	25.000	ug/L	96.2		70 - 130		
Bromodichloromethane	BYD2251-BS1	LCS	25.110	25.000	ug/L	100		70 - 130		
Chlorobenzene	BYD2251-BS1	LCS	25.020	25.000	ug/L	100		70 - 130		
Chloroethane	BYD2251-BS1	LCS	22.990	25.000	ug/L	92.0		70 - 130		
1,4-Dichlorobenzene	BYD2251-BS1	LCS	24.280	25.000	ug/L	97.1		70 - 130		
1,1-Dichloroethane	BYD2251-BS1	LCS	23.300	25.000	ug/L	93.2		70 - 130		
1,1-Dichloroethene	BYD2251-BS1	LCS	24.810	25.000	ug/L	99.2		70 - 130		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2251										
Toluene	BYD2251-BS1	LCS	24.800	25.000	ug/L	99.2		70 - 130		
Trichloroethene	BYD2251-BS1	LCS	25.460	25.000	ug/L	102		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYD2251-BS1	LCS	9.5800	10.000	ug/L	95.8		75 - 125		
Toluene-d8 (Surrogate)	BYD2251-BS1	LCS	9.9700	10.000	ug/L	99.7		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYD2251-BS1	LCS	9.6500	10.000	ug/L	96.5		80 - 120		

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2113	Used client sample: Y - Description: MW-22-2, 04/23/2015 08:45										
Benzene	MS	1509842-07	ND	24.340	25.000	ug/L		97.4		70 - 130	
	MSD	1509842-07	ND	24.200	25.000	ug/L	0.6	96.8	20	70 - 130	
Bromodichloromethane	MS	1509842-07	ND	24.670	25.000	ug/L		98.7		70 - 130	
	MSD	1509842-07	ND	24.690	25.000	ug/L	0.1	98.8	20	70 - 130	
Chlorobenzene	MS	1509842-07	ND	25.700	25.000	ug/L		103		70 - 130	
	MSD	1509842-07	ND	25.670	25.000	ug/L	0.1	103	20	70 - 130	
Chloroethane	MS	1509842-07	ND	24.930	25.000	ug/L		99.7		70 - 130	
	MSD	1509842-07	ND	24.880	25.000	ug/L	0.2	99.5	20	70 - 130	
1,4-Dichlorobenzene	MS	1509842-07	ND	24.950	25.000	ug/L		99.8		70 - 130	
	MSD	1509842-07	ND	24.430	25.000	ug/L	2.1	97.7	20	70 - 130	
1,1-Dichloroethane	MS	1509842-07	ND	23.870	25.000	ug/L		95.5		70 - 130	
	MSD	1509842-07	ND	23.890	25.000	ug/L	0.1	95.6	20	70 - 130	
1,1-Dichloroethene	MS	1509842-07	ND	25.840	25.000	ug/L		103		70 - 130	
	MSD	1509842-07	ND	25.190	25.000	ug/L	2.5	101	20	70 - 130	
Toluene	MS	1509842-07	ND	23.940	25.000	ug/L		95.8		70 - 130	
	MSD	1509842-07	ND	24.240	25.000	ug/L	1.2	97.0	20	70 - 130	
Trichloroethene	MS	1509842-07	ND	26.030	25.000	ug/L		104		70 - 130	
	MSD	1509842-07	ND	25.300	25.000	ug/L	2.8	101	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1509842-07	ND	9.0700	10.000	ug/L		90.7		75 - 125	
	MSD	1509842-07	ND	9.5600	10.000	ug/L	5.3	95.6		75 - 125	
Toluene-d8 (Surrogate)	MS	1509842-07	ND	9.6600	10.000	ug/L		96.6		80 - 120	
	MSD	1509842-07	ND	9.9600	10.000	ug/L	3.1	99.6		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1509842-07	ND	9.7300	10.000	ug/L		97.3		80 - 120	
	MSD	1509842-07	ND	9.8500	10.000	ug/L	1.2	98.5		80 - 120	
QC Batch ID: BYD2199	Used client sample: Y - Description: MW-25-2, 04/23/2015 12:20										
Benzene	MS	1509842-12	ND	24.040	25.000	ug/L		96.2		70 - 130	
	MSD	1509842-12	ND	23.830	25.000	ug/L	0.9	95.3	20	70 - 130	
Bromodichloromethane	MS	1509842-12	ND	25.450	25.000	ug/L		102		70 - 130	
	MSD	1509842-12	ND	25.380	25.000	ug/L	0.3	102	20	70 - 130	
Chlorobenzene	MS	1509842-12	ND	26.510	25.000	ug/L		106		70 - 130	
	MSD	1509842-12	ND	25.970	25.000	ug/L	2.1	104	20	70 - 130	
Chloroethane	MS	1509842-12	ND	23.460	25.000	ug/L		93.8		70 - 130	
	MSD	1509842-12	ND	23.210	25.000	ug/L	1.1	92.8	20	70 - 130	
1,4-Dichlorobenzene	MS	1509842-12	ND	25.750	25.000	ug/L		103		70 - 130	
	MSD	1509842-12	ND	24.900	25.000	ug/L	3.4	99.6	20	70 - 130	
1,1-Dichloroethane	MS	1509842-12	ND	23.920	25.000	ug/L		95.7		70 - 130	
	MSD	1509842-12	ND	23.410	25.000	ug/L	2.2	93.6	20	70 - 130	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2199	Used client sample: Y - Description: MW-25-2, 04/23/2015 12:20										
1,1-Dichloroethene	MS	1509842-12	ND	25.070	25.000	ug/L		100		70 - 130	
	MSD	1509842-12	ND	24.600	25.000	ug/L	1.9	98.4	20	70 - 130	
Toluene	MS	1509842-12	ND	24.240	25.000	ug/L		97.0		70 - 130	
	MSD	1509842-12	ND	24.480	25.000	ug/L	1.0	97.9	20	70 - 130	
Trichloroethene	MS	1509842-12	0.27000	25.640	25.000	ug/L		101		70 - 130	
	MSD	1509842-12	0.27000	26.280	25.000	ug/L	2.5	104	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1509842-12	ND	9.3100	10.000	ug/L		93.1		75 - 125	
	MSD	1509842-12	ND	8.8600	10.000	ug/L	5.0	88.6		75 - 125	
Toluene-d8 (Surrogate)	MS	1509842-12	ND	10.070	10.000	ug/L		101		80 - 120	
	MSD	1509842-12	ND	9.8300	10.000	ug/L	2.4	98.3		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1509842-12	ND	10.220	10.000	ug/L		102		80 - 120	
	MSD	1509842-12	ND	9.6500	10.000	ug/L	5.7	96.5		80 - 120	
QC Batch ID: BYD2251	Used client sample: Y - Description: MW-26-2, 04/23/2015 13:40										
Benzene	MS	1509842-15	ND	26.480	25.000	ug/L		106		70 - 130	
	MSD	1509842-15	ND	23.800	25.000	ug/L	10.7	95.2	20	70 - 130	
Bromodichloromethane	MS	1509842-15	ND	29.000	25.000	ug/L		116		70 - 130	
	MSD	1509842-15	ND	25.870	25.000	ug/L	11.4	103	20	70 - 130	
Chlorobenzene	MS	1509842-15	ND	28.470	25.000	ug/L		114		70 - 130	
	MSD	1509842-15	ND	25.910	25.000	ug/L	9.4	104	20	70 - 130	
Chloroethane	MS	1509842-15	ND	25.650	25.000	ug/L		103		70 - 130	
	MSD	1509842-15	ND	23.870	25.000	ug/L	7.2	95.5	20	70 - 130	
1,4-Dichlorobenzene	MS	1509842-15	ND	27.720	25.000	ug/L		111		70 - 130	
	MSD	1509842-15	ND	25.400	25.000	ug/L	8.7	102	20	70 - 130	
1,1-Dichloroethane	MS	1509842-15	ND	26.310	25.000	ug/L		105		70 - 130	
	MSD	1509842-15	ND	23.640	25.000	ug/L	10.7	94.6	20	70 - 130	
1,1-Dichloroethene	MS	1509842-15	ND	27.270	25.000	ug/L		109		70 - 130	
	MSD	1509842-15	ND	24.510	25.000	ug/L	10.7	98.0	20	70 - 130	
Toluene	MS	1509842-15	ND	27.690	25.000	ug/L		111		70 - 130	
	MSD	1509842-15	ND	24.800	25.000	ug/L	11.0	99.2	20	70 - 130	
Trichloroethene	MS	1509842-15	0.15000	29.360	25.000	ug/L		117		70 - 130	
	MSD	1509842-15	0.15000	26.210	25.000	ug/L	11.3	104	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1509842-15	ND	9.2000	10.000	ug/L		92.0		75 - 125	
	MSD	1509842-15	ND	9.0200	10.000	ug/L	2.0	90.2		75 - 125	
Toluene-d8 (Surrogate)	MS	1509842-15	ND	10.170	10.000	ug/L		102		80 - 120	
	MSD	1509842-15	ND	9.7600	10.000	ug/L	4.1	97.6		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1509842-15	ND	9.6700	10.000	ug/L		96.7		80 - 120	
	MSD	1509842-15	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: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2113						
Chloroacetonitrile	BYD2113-BLK1	0	ug/L			
1-Chlorobutane	BYD2113-BLK1	0	ug/L			
1,1-Dichloropropanone	BYD2113-BLK1	0	ug/L			
Methyl acrylate	BYD2113-BLK1	0	ug/L			
Nitrobenzene	BYD2113-BLK1	0	ug/L			
2-Nitropropane	BYD2113-BLK1	0	ug/L			
QC Batch ID: BYD2199						
Chloroacetonitrile	BYD2199-BLK1	0	ug/L			
1-Chlorobutane	BYD2199-BLK1	0	ug/L			
1,1-Dichloropropanone	BYD2199-BLK1	0	ug/L			
Methyl acrylate	BYD2199-BLK1	0	ug/L			
Nitrobenzene	BYD2199-BLK1	0	ug/L			
2-Nitropropane	BYD2199-BLK1	0	ug/L			
QC Batch ID: BYD2251						
Chloroacetonitrile	BYD2251-BLK1	0	ug/L			
1-Chlorobutane	BYD2251-BLK1	0	ug/L			
1,1-Dichloropropanone	BYD2251-BLK1	0	ug/L			
Methyl acrylate	BYD2251-BLK1	0	ug/L			
Nitrobenzene	BYD2251-BLK1	0	ug/L			
2-Nitropropane	BYD2251-BLK1	0	ug/L			

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2151						
Chloride	BYD2151-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD2151-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD2151-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD2152						
Chloride	BYD2152-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD2152-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD2152-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD2191						
Nitrite as N	BYD2191-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD2192						
Nitrite as N	BYD2192-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD2194						
Nitrite as N	BYD2194-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD2292						
Bicarbonate	BYD2292-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2292-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2292-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2293						
Bicarbonate	BYD2293-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2293-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2293-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2432						
Total Dissolved Solids @ 180 C	BYD2432-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYD2433						
Total Dissolved Solids @ 180 C	BYD2433-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYD2640						
Total Recoverable Calcium	BYD2640-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	BYD2640-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	**BYD2640-BLK1**	**0.021738**	**mg/L**	**0.50**	**0.017**	**J**
Total Recoverable Potassium	BYD2640-BLK1	ND	mg/L	1.0	0.10	

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYE0001						
Total Recoverable Calcium	BYE0001-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	BYE0001-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	BYE0001-BLK1	ND	mg/L	0.50	0.017	
Total Recoverable Potassium	BYE0001-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE0053						
Total Recoverable Calcium	BYE0053-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	**BYE0053-BLK1**	**0.021390**	**mg/L**	**0.050**	**0.019**	**J**
Total Recoverable Sodium	**BYE0053-BLK1**	**0.055527**	**mg/L**	**0.50**	**0.017**	**J**
Total Recoverable Potassium	BYE0053-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE0280						
Perchlorate	BYE0280-BLK1	ND	ug/L	4.0	1.3	
QC Batch ID: BYE0290						
Perchlorate	BYE0290-BLK1	ND	ug/L	4.0	1.3	
QC Batch ID: BYE0291						
Perchlorate	BYE0291-BLK1	ND	ug/L	4.0	1.3	
QC Batch ID: BYE0556						
Perchlorate	BYE0556-BLK1	ND	ug/L	4.0	1.3	
QC Batch ID: BYE0826						
Chloride	BYE0826-BLK1	ND	mg/L	0.50	0.061	
Sulfate	BYE0826-BLK1	ND	mg/L	1.0	0.10	

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2151										
Chloride	BYD2151-BS1	LCS	46.181	50.000	mg/L	92.4		90 - 110		
Nitrate as N	BYD2151-BS1	LCS	4.6220	5.0000	mg/L	92.4		90 - 110		
Sulfate	BYD2151-BS1	LCS	91.948	100.00	mg/L	91.9		90 - 110		
QC Batch ID: BYD2152										
Chloride	BYD2152-BS1	LCS	46.475	50.000	mg/L	93.0		90 - 110		
Nitrate as N	BYD2152-BS1	LCS	4.6350	5.0000	mg/L	92.7		90 - 110		
Sulfate	BYD2152-BS1	LCS	92.119	100.00	mg/L	92.1		90 - 110		
QC Batch ID: BYD2191										
Nitrite as N	BYD2191-BS1	LCS	0.52956	0.50000	mg/L	106		90 - 110		
QC Batch ID: BYD2192										
Nitrite as N	BYD2192-BS1	LCS	0.52794	0.50000	mg/L	106		90 - 110		
QC Batch ID: BYD2194										
Nitrite as N	BYD2194-BS1	LCS	0.52827	0.50000	mg/L	106		90 - 110		
QC Batch ID: BYD2292										
Total Alkalinity as CaCO3	BYD2292-BS3	LCS	103.75	100.00	mg/L	104		90 - 110		
pH	BYD2292-BS2	LCS	7.0500	7.0000	pH Units	101		95 - 105		
QC Batch ID: BYD2293										
Total Alkalinity as CaCO3	BYD2293-BS3	LCS	100.26	100.00	mg/L	100		90 - 110		
pH	BYD2293-BS2	LCS	7.0900	7.0000	pH Units	101		95 - 105		
QC Batch ID: BYD2432										
Total Dissolved Solids @ 180 C	BYD2432-BS1	LCS	550.00	586.00	mg/L	93.9		90 - 110		
QC Batch ID: BYD2433										
Total Dissolved Solids @ 180 C	BYD2433-BS1	LCS	555.00	586.00	mg/L	94.7		90 - 110		
QC Batch ID: BYD2640										
Total Recoverable Calcium	BYD2640-BS1	LCS	10.423	10.000	mg/L	104		85 - 115		
Total Recoverable Magnesium	BYD2640-BS1	LCS	11.161	10.000	mg/L	112		85 - 115		
Total Recoverable Sodium	BYD2640-BS1	LCS	10.506	10.000	mg/L	105		85 - 115		
Total Recoverable Potassium	BYD2640-BS1	LCS	10.179	10.000	mg/L	102		85 - 115		
QC Batch ID: BYE0001										
Total Recoverable Calcium	BYE0001-BS1	LCS	9.8908	10.000	mg/L	98.9		85 - 115		
Total Recoverable Magnesium	BYE0001-BS1	LCS	10.480	10.000	mg/L	105		85 - 115		
Total Recoverable Sodium	BYE0001-BS1	LCS	10.045	10.000	mg/L	100		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0001										
Total Recoverable Potassium	BYE0001-BS1	LCS	9.8047	10.000	mg/L	98.0		85 - 115		
QC Batch ID: BYE0053										
Total Recoverable Calcium	BYE0053-BS1	LCS	9.8908	10.000	mg/L	98.9		85 - 115		
Total Recoverable Magnesium	BYE0053-BS1	LCS	10.480	10.000	mg/L	105		85 - 115		
Total Recoverable Sodium	BYE0053-BS1	LCS	10.045	10.000	mg/L	100		85 - 115		
Total Recoverable Potassium	BYE0053-BS1	LCS	9.8047	10.000	mg/L	98.0		85 - 115		
QC Batch ID: BYE0280										
Perchlorate	BYE0280-BS1	LCS	9.4764	10.000	ug/L	94.8		85 - 115		
QC Batch ID: BYE0290										
Perchlorate	BYE0290-BS1	LCS	9.7996	10.000	ug/L	98.0		85 - 115		
QC Batch ID: BYE0291										
Perchlorate	BYE0291-BS1	LCS	10.805	10.000	ug/L	108		85 - 115		
QC Batch ID: BYE0556										
Perchlorate	BYE0556-BS1	LCS	10.118	10.000	ug/L	101		85 - 115		
QC Batch ID: BYE0826										
Chloride	BYE0826-BS1	LCS	51.783	50.000	mg/L	104		90 - 110		
Sulfate	BYE0826-BS1	LCS	104.85	100.00	mg/L	105		90 - 110		

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2151	Used client sample: Y - Description: MW-22-2, 04/23/2015 08:45										
Chloride	DUP	1509842-07	47.551	47.456		mg/L	0.2		10		
	MS	1509842-07	47.551	101.73	50.505	mg/L		107		80 - 120	
	MSD	1509842-07	47.551	101.60	50.505	mg/L	0.1	107	10	80 - 120	
Nitrate as N	DUP	1509842-07	8.3370	8.3290		mg/L	0.1		10		
	MS	1509842-07	8.3370	13.540	5.0505	mg/L		103		80 - 120	
	MSD	1509842-07	8.3370	13.539	5.0505	mg/L	0.0	103	10	80 - 120	
Sulfate	DUP	1509842-07	46.186	51.058		mg/L	10.0		10		
	MS	1509842-07	46.186	156.13	101.01	mg/L		109		80 - 120	
	MSD	1509842-07	46.186	155.97	101.01	mg/L	0.1	109	10	80 - 120	
QC Batch ID: BYD2152	Used client sample: Y - Description: MW-25-2, 04/23/2015 12:20										
Chloride	DUP	1509842-12	49.917	49.963		mg/L	0.1		10		
	MS	1509842-12	49.917	103.90	50.505	mg/L		107		80 - 120	
	MSD	1509842-12	49.917	104.00	50.505	mg/L	0.1	107	10	80 - 120	
Nitrate as N	DUP	1509842-12	8.7340	8.7510		mg/L	0.2		10		
	MS	1509842-12	8.7340	13.907	5.0505	mg/L		102		80 - 120	
	MSD	1509842-12	8.7340	13.913	5.0505	mg/L	0.0	103	10	80 - 120	
Sulfate	DUP	1509842-12	82.159	82.143		mg/L	0.0		10		
	MS	1509842-12	82.159	191.82	101.01	mg/L		109		80 - 120	
	MSD	1509842-12	82.159	192.06	101.01	mg/L	0.1	109	10	80 - 120	
QC Batch ID: BYD2191	Used client sample: Y - Description: MW-22-2, 04/23/2015 08:45										
Nitrite as N	DUP	1509842-07	ND	ND		mg/L			10		
	MS	1509842-07	ND	0.53718	0.52632	mg/L		102		90 - 110	
	MSD	1509842-07	ND	0.53975	0.52632	mg/L	0.5	103	10	90 - 110	
QC Batch ID: BYD2192	Used client sample: Y - Description: MW-25-2, 04/23/2015 12:20										
Nitrite as N	DUP	1509842-12	ND	ND		mg/L			10		
	MS	1509842-12	ND	0.52895	0.52632	mg/L		101		90 - 110	
	MSD	1509842-12	ND	0.52834	0.52632	mg/L	0.1	100	10	90 - 110	
QC Batch ID: BYD2194	Used client sample: Y - Description: MW-26-2, 04/23/2015 13:40										
Nitrite as N	DUP	1509842-15	2.0579	2.0483		mg/L	0.5		10		
	MS	1509842-15	2.0579	4.6762	2.6316	mg/L		99.5		90 - 110	
	MSD	1509842-15	2.0579	4.6651	2.6316	mg/L	0.2	99.1	10	90 - 110	
QC Batch ID: BYD2292	Used client sample: Y - Description: EB-4-4/23/15, 04/23/2015 06:15										
Bicarbonate	DUP	1509842-02	ND	ND		mg/L			10		
Carbonate	DUP	1509842-02	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1509842-02	ND	ND		mg/L			10		
pH	DUP	1509842-02	5.1400	5.0500		pH Units	1.8		20		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2293	Used client sample: Y - Description: MW-22-2, 04/23/2015 08:45										
Bicarbonate	DUP	1509842-07	216.84	217.58		mg/L	0.3		10		
Carbonate	DUP	1509842-07	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1509842-07	177.84	178.45		mg/L	0.3		10		
pH	DUP	1509842-07	8.2200	8.2100		pH Units	0.1		20		
QC Batch ID: BYD2432	Used client sample: Y - Description: MW-22-2, 04/23/2015 08:45										
Total Dissolved Solids @ 180 C	DUP	1509842-07	404.00	408.00		mg/L	1.0		10		
QC Batch ID: BYD2433	Used client sample: Y - Description: MW-25-2, 04/23/2015 12:20										
Total Dissolved Solids @ 180 C	DUP	1509842-12	486.66	493.33		mg/L	1.4		10		
QC Batch ID: BYD2640	Used client sample: Y - Description: MW-22-2, 04/23/2015 08:45										
Total Recoverable Calcium	DUP	1509842-07	60.424	62.839		mg/L	3.9		20		
	MS	1509842-07	60.424	72.713	10.000	mg/L		123		75 - 125	
	MSD	1509842-07	60.424	72.781	10.000	mg/L	0.1	124	20	75 - 125	
Total Recoverable Magnesium	DUP	1509842-07	24.744	25.579		mg/L	3.3		20		
	MS	1509842-07	24.744	36.073	10.000	mg/L		113		75 - 125	
	MSD	1509842-07	24.744	36.011	10.000	mg/L	0.2	113	20	75 - 125	
Total Recoverable Sodium	DUP	1509842-07	32.582	33.737		mg/L	3.5		20		
	MS	1509842-07	32.582	43.831	10.000	mg/L		112		75 - 125	
	MSD	1509842-07	32.582	43.690	10.000	mg/L	0.3	111	20	75 - 125	
Total Recoverable Potassium	DUP	1509842-07	2.1338	2.2167		mg/L	3.8		20		
	MS	1509842-07	2.1338	12.291	10.000	mg/L		102		75 - 125	
	MSD	1509842-07	2.1338	12.120	10.000	mg/L	1.4	99.9	20	75 - 125	
QC Batch ID: BYE0001	Used client sample: Y - Description: MW-25-2, 04/23/2015 12:20										
Total Recoverable Calcium	DUP	**1509842-12**	**81.203**	**84.315**		**mg/L**	**3.8**		**20**		
	MS	**1509842-12**	**81.203**	**93.832**	**10.000**	**mg/L**		**126**		**75 - 125**	**A03**
	MSD	**1509842-12**	**81.203**	**91.761**	**10.000**	**mg/L**	**2.2**	**106**	**20**	**75 - 125**	
Total Recoverable Magnesium	DUP	1509842-12	28.997	30.119		mg/L	3.8		20		
	MS	1509842-12	28.997	40.098	10.000	mg/L		111		75 - 125	
	MSD	1509842-12	28.997	39.513	10.000	mg/L	1.5	105	20	75 - 125	
Total Recoverable Sodium	DUP	1509842-12	33.066	34.248		mg/L	3.5		20		
	MS	1509842-12	33.066	43.882	10.000	mg/L		108		75 - 125	
	MSD	1509842-12	33.066	43.095	10.000	mg/L	1.8	100	20	75 - 125	
Total Recoverable Potassium	DUP	1509842-12	2.7068	2.7462		mg/L	1.4		20		
	MS	1509842-12	2.7068	12.937	10.000	mg/L		102		75 - 125	
	MSD	1509842-12	2.7068	12.935	10.000	mg/L	0.0	102	20	75 - 125	
QC Batch ID: BYE0053	Used client sample: Y - Description: MW-26-2, 04/23/2015 13:40										

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0053	Used client sample: Y - Description: MW-26-2, 04/23/2015 13:40										
Total Recoverable Calcium	DUP	**1509842-15**	**53.997**	**54.147**		**mg/L**	**0.3**		**20**		
	MS	**1509842-15**	**53.997**	**61.496**	**10.000**	**mg/L**		**75.0**		**75 - 125**	
	MSD	**1509842-15**	**53.997**	**60.365**	**10.000**	**mg/L**	**1.9**	**63.7**	**20**	**75 - 125**	**A03**
Total Recoverable Magnesium	DUP	1509842-15	31.783	31.943		mg/L	0.5		20		
	MS	1509842-15	31.783	40.922	10.000	mg/L		91.4		75 - 125	
	MSD	1509842-15	31.783	40.046	10.000	mg/L	2.2	82.6	20	75 - 125	
Total Recoverable Sodium	DUP	**1509842-15**	**43.222**	**43.303**		**mg/L**	**0.2**		**20**		
	MS	**1509842-15**	**43.222**	**51.544**	**10.000**	**mg/L**		**83.2**		**75 - 125**	
	MSD	**1509842-15**	**43.222**	**50.629**	**10.000**	**mg/L**	**1.8**	**74.1**	**20**	**75 - 125**	**A03**
Total Recoverable Potassium	DUP	1509842-15	2.9992	3.0647		mg/L	2.2		20		
	MS	1509842-15	2.9992	13.368	10.000	mg/L		104		75 - 125	
	MSD	1509842-15	2.9992	12.725	10.000	mg/L	4.9	97.3	20	75 - 125	
QC Batch ID: BYE0280	Used client sample: Y - Description: MW-22-2, 04/23/2015 08:45										
Perchlorate	DUP	1509842-07	ND	2.7372		ug/L			15		J
	MS	1509842-07	ND	21.752	20.202	ug/L		108		80 - 120	
	MSD	1509842-07	ND	23.365	20.202	ug/L	7.2	116	15	80 - 120	
QC Batch ID: BYE0290	Used client sample: Y - Description: MW-25-2, 04/23/2015 12:20										
Perchlorate	DUP	1509842-12	14.083	13.579		ug/L	3.6		15		
	MS	1509842-12	14.083	34.509	20.202	ug/L		101		80 - 120	
	MSD	1509842-12	14.083	33.428	20.202	ug/L	3.2	95.8	15	80 - 120	
QC Batch ID: BYE0291	Used client sample: Y - Description: MW-26-2, 04/23/2015 13:40										
Perchlorate	DUP	1509842-15	ND	3.0828		ug/L			15		J
	MS	1509842-15	ND	23.243	20.202	ug/L		115		80 - 120	
	MSD	1509842-15	ND	23.022	20.202	ug/L	1.0	114	15	80 - 120	
QC Batch ID: BYE0556	Used client sample: N										
Perchlorate	DUP	1510784-01	ND	ND		ug/L			15		
	MS	1510784-01	ND	11.373	10.101	ug/L		113		80 - 120	
	MSD	1510784-01	ND	10.993	10.101	ug/L	3.4	109	15	80 - 120	
QC Batch ID: BYE0826	Used client sample: N										
Chloride	DUP	1511134-01	81.324	81.344		mg/L	0.0		10		
	MS	1511134-01	81.324	133.14	50.505	mg/L		103		80 - 120	
	MSD	1511134-01	81.324	132.89	50.505	mg/L	0.2	102	10	80 - 120	
Sulfate	DUP	1511134-01	2.4040	2.3030		mg/L	4.3		10		
	MS	1511134-01	2.4040	106.78	101.01	mg/L		103		80 - 120	
	MSD	1511134-01	2.4040	106.51	101.01	mg/L	0.3	103	10	80 - 120	

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Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2195						
Hexavalent Chromium	BYD2195-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYD2197						
Hexavalent Chromium	BYD2197-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYD2640						
Total Recoverable Iron	**BYD2640-BLK2**	**36.755**	**ug/L**	**50**	**6.5**	**J**
QC Batch ID: BYD2643						
Total Recoverable Arsenic	BYD2643-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BYD2643-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BYD2643-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYE0001						
Total Recoverable Iron	**BYE0001-BLK1**	**15.110**	**ug/L**	**50**	**6.5**	**J**
QC Batch ID: BYE0002						
Total Recoverable Arsenic	BYE0002-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	**BYE0002-BLK1**	**0.55000**	**ug/L**	**3.0**	**0.50**	**J**
Total Recoverable Lead	BYE0002-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYE0050						
Total Recoverable Arsenic	BYE0050-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BYE0050-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BYE0050-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYE0053						
Total Recoverable Iron	**BYE0053-BLK2**	**32.503**	**ug/L**	**50**	**6.5**	**J**

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Metals Analysis

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2195										
Hexavalent Chromium	BYD2195-BS1	LCS	0.051182	0.050000	mg/L	102		85 - 115		
QC Batch ID: BYD2197										
Hexavalent Chromium	BYD2197-BS1	LCS	0.049844	0.050000	mg/L	99.7		85 - 115		
QC Batch ID: BYD2640										
Total Recoverable Iron	BYD2640-BS2	LCS	1109.3	1000.0	ug/L	111		85 - 115		
QC Batch ID: BYD2643										
Total Recoverable Arsenic	BYD2643-BS1	LCS	99.560	100.00	ug/L	99.6		85 - 115		
Total Recoverable Chromium	BYD2643-BS1	LCS	39.683	40.000	ug/L	99.2		85 - 115		
Total Recoverable Lead	BYD2643-BS1	LCS	110.20	100.00	ug/L	110		85 - 115		
QC Batch ID: BYE0001										
Total Recoverable Iron	BYE0001-BS1	LCS	1143.2	1000.0	ug/L	114		85 - 115		
QC Batch ID: BYE0002										
Total Recoverable Arsenic	BYE0002-BS1	LCS	110.01	100.00	ug/L	110		85 - 115		
Total Recoverable Chromium	BYE0002-BS1	LCS	44.340	40.000	ug/L	111		85 - 115		
Total Recoverable Lead	BYE0002-BS1	LCS	110.84	100.00	ug/L	111		85 - 115		
QC Batch ID: BYE0050										
Total Recoverable Arsenic	BYE0050-BS1	LCS	104.02	100.00	ug/L	104		85 - 115		
Total Recoverable Chromium	BYE0050-BS1	LCS	40.177	40.000	ug/L	100		85 - 115		
Total Recoverable Lead	BYE0050-BS1	LCS	103.68	100.00	ug/L	104		85 - 115		
QC Batch ID: BYE0053										
Total Recoverable Iron	BYE0053-BS2	LCS	1135.9	1000.0	ug/L	114		85 - 115		

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Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2195	Used client sample: Y - Description: MW-22-2, 04/23/2015 08:45										
Hexavalent Chromium	DUP	1509842-07	0.00092200	0.00096200		mg/L	4.2		10		J
	MS	1509842-07	0.00092200	0.052272	0.052632	mg/L		97.6		85 - 115	
	MSD	1509842-07	0.00092200	0.053655	0.052632	mg/L	2.6	100	10	85 - 115	
QC Batch ID: BYD2197	Used client sample: Y - Description: MW-25-2, 04/23/2015 12:20										
Hexavalent Chromium	DUP	**1509842-12**	**0.0011200**	**0.0012570**		**mg/L**	**11.5**		**10**		**J,A02**
	MS	**1509842-12**	**0.0011200**	**0.051661**	**0.052632**	**mg/L**		**96.0**		**85 - 115**	
	MSD	**1509842-12**	**0.0011200**	**0.052115**	**0.052632**	**mg/L**	**0.9**	**96.9**	**10**	**85 - 115**	
QC Batch ID: BYD2640	Used client sample: Y - Description: MW-22-2, 04/23/2015 08:45										
Total Recoverable Iron	DUP	1509842-07	175.97	170.21		ug/L	3.3		20		
	MS	1509842-07	175.97	1213.1	1000.0	ug/L		104		75 - 125	
	MSD	1509842-07	175.97	1207.8	1000.0	ug/L	0.4	103	20	75 - 125	
QC Batch ID: BYD2643	Used client sample: Y - Description: MW-22-2, 04/23/2015 08:45										
Total Recoverable Arsenic	DUP	**1509842-07**	**1.0890**	**0.86600**		**ug/L**	**22.8**		**20**		**J,A02**
	MS	**1509842-07**	**1.0890**	**105.61**	**100.00**	**ug/L**		**105**		**70 - 130**	
	MSD	**1509842-07**	**1.0890**	**106.65**	**100.00**	**ug/L**	**1.0**	**106**	**20**	**70 - 130**	
Total Recoverable Chromium	DUP	1509842-07	1.7230	1.6330		ug/L	5.4		20		J
	MS	1509842-07	1.7230	37.744	40.000	ug/L		90.1		70 - 130	
	MSD	1509842-07	1.7230	37.627	40.000	ug/L	0.3	89.8	20	70 - 130	
Total Recoverable Lead	DUP	1509842-07	ND	ND		ug/L			20		
	MS	1509842-07	ND	107.30	100.00	ug/L		107		70 - 130	
	MSD	1509842-07	ND	104.88	100.00	ug/L	2.3	105	20	70 - 130	
QC Batch ID: BYE0001	Used client sample: Y - Description: MW-25-2, 04/23/2015 12:20										
Total Recoverable Iron	DUP	**1509842-12**	**70.939**	**120.95**		**ug/L**	**52.1**		**20**		**A02**
	MS	**1509842-12**	**70.939**	**1219.8**	**1000.0**	**ug/L**		**115**		**75 - 125**	
	MSD	**1509842-12**	**70.939**	**1266.9**	**1000.0**	**ug/L**	**3.8**	**120**	**20**	**75 - 125**	
QC Batch ID: BYE0002	Used client sample: Y - Description: MW-25-2, 04/23/2015 12:20										
Total Recoverable Arsenic	DUP	1509842-12	0.97400	0.93200		ug/L	4.4		20		J
	MS	1509842-12	0.97400	109.90	100.00	ug/L		109		70 - 130	
	MSD	1509842-12	0.97400	106.91	100.00	ug/L	2.8	106	20	70 - 130	
Total Recoverable Chromium	DUP	1509842-12	2.5780	2.5430		ug/L	1.4		20		J
	MS	1509842-12	2.5780	41.857	40.000	ug/L		98.2		70 - 130	
	MSD	1509842-12	2.5780	40.680	40.000	ug/L	2.9	95.3	20	70 - 130	
Total Recoverable Lead	DUP	1509842-12	ND	ND		ug/L			20		
	MS	1509842-12	ND	103.65	100.00	ug/L		104		70 - 130	
	MSD	1509842-12	ND	100.63	100.00	ug/L	3.0	101	20	70 - 130	
QC Batch ID: BYE0050	Used client sample: Y - Description: MW-26-2, 04/23/2015 13:40										

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/13/2015 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0050	Used client sample: Y - Description: MW-26-2, 04/23/2015 13:40										
Total Recoverable Arsenic	DUP	1509842-15	1.1610	1.0550		ug/L	9.6		20		J
	MS	1509842-15	1.1610	113.39	100.00	ug/L		112		70 - 130	
	MSD	1509842-15	1.1610	115.90	100.00	ug/L	2.2	115	20	70 - 130	
Total Recoverable Chromium	DUP	1509842-15	0.79300	0.80100		ug/L	1.0		20		J
	MS	1509842-15	0.79300	40.069	40.000	ug/L		98.2		70 - 130	
	MSD	1509842-15	0.79300	41.488	40.000	ug/L	3.5	102	20	70 - 130	
Total Recoverable Lead	DUP	1509842-15	ND	ND		ug/L			20		
	MS	1509842-15	ND	104.01	100.00	ug/L		104		70 - 130	
	MSD	1509842-15	ND	104.44	100.00	ug/L	0.4	104	20	70 - 130	
QC Batch ID: BYE0053	Used client sample: Y - Description: MW-26-2, 04/23/2015 13:40										
Total Recoverable Iron	DUP	1509842-15	1038.0	1002.1		ug/L	3.5		20		
	MS	1509842-15	1038.0	2056.9	1000.0	ug/L		102		75 - 125	
	MSD	1509842-15	1038.0	1988.2	1000.0	ug/L	3.4	95.0	20	75 - 125	

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Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/13/2015 13:34 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A02	The difference between duplicate readings is less than the quantitation limit.
A03	The sample concentration is more than 4 times the spike level.
A07	Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

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Date of Report: 05/11/2015

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 2nd Qtr. 2015
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1509937
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 4/24/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.

Chain of Custody Form

*Required Fields

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Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:* (614) 792 - 2897 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-109937

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing*
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)		Notes
-1	TB-5-4/24/15	4-24-15	0600	AQ	X										
-2	SB-2-4/24/15		0615		X	X	X	X	X	X					
-3	EB-5-4/24/15		0625		X	X	X	X	X	X					
-4	MW-12-5		0700		X	X	X	X	X	X					MS/MSD
-5	MW-12-4		0740		X	X	X	X	X	X					
-6	DUP-5-2015		0750		X	X	X	X	X	X					
-7	MW-12-3		0825		X	X	X	X	X	X					
-8	MW-12-2		0900		X	X	X	X	X	X					Level IV
-9	MW-12-1		0930		X	X	X	X	X	X					
-10	MW-19-5		1025		X	X	X	X	X	X					
-11	MW-19-4	↓	1100	↓	X	X	X	X	X	X					

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

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

Lab TAT Approval: _____ *Additional Charges May Apply

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By:	4-24-15	1450	1.Received By:	4/24/15	1515
2. Relinquished By:	4/24/15	1515	2.Received By:	4-24-15	1515
3. Relinquished By:	4-24-15	1950	3.Received By:	4.24.15	1950

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.

Chain of Custody Form

*Required Fields

Page 2 of 2

Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:*(614) 792 - 2897 Fax#: (614) 792- 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-09937

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)	Notes
-12	MW-19-3	4-24-15	1135	AQ	X	X	X	X	X	X				
-13	MW-19-2	↓	1205	↓	X	X	X	X	X	X				
-14	MW-19-1	↓	1320	↓	X	X	X	X	X	X				

CHK BY ✓
DISTRIBUTION
SUB OUT ☐

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 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)

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By:	4-24-15	1450	1.Received By:	4/24/15	1515
2. Relinquished By:	4/24/15	1515	2.Received By:	4-24-15	1515
3.Relinquished By:	4-24-15	1950	3.Received By:	4.24.15	1950

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Chain of Custody and Cooler Receipt Form for 1509937 Page 3 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 4

Submission #: 15-09937

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received
☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4/24/15 1950
Temperature: (A) 2.0 °C / (C) 2.1 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										D
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										E
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		ABC	ABC	A-F	ABC	ABC	ABC	ABC	ABC	ABC
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By: KIB Date/Time: 4/24/15 2015 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1509937 Page 4 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 2 Of 4

Submission #: 15-09937

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4/24/15 1950

Temperature: (A) 2.0 °C / (C) 2.1 °C Analyst Init KB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL				D						
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS				E						
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABC	ABC	ABC	ABC						
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: KB Date/Time: 4/24/15 2015 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1509937 Page 5 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 3 Of 4

Submission #: 15-09937

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4/24/15 1950
Temperature: (A) 0.5 °C / (C) 0.6 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL	D 4/24/15	D	D	G	D	D	D	D	D	D
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	E 4/24/15	E	E	H	E	E	E	E	E	E
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: KIB Date/Time: 4/24/15 2018 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1509937 Page 6 of 6

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 4 Of 4

Submission #: 15-09937

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received
☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4/24/15 1950
Temperature: (A) 0.5 °C / (C) 0.6 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 12	13	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL	D	D								
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	E	E								
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By: KIB Date/Time: 4/24/15 2019 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509937-01	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 06:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-5-4/24/15	**Lab Matrix:**	Water
	Sampled By:	BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-5-4/24/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509937-02	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 06:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-2-4/24/15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): SB-2-4/24/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509937-03	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 06:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-5-4/24/15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-5-4/24/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509937-04	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 06:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-12-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-12-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509937-05	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 07:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-12-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-12-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509937-06	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 07:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-5-2Q15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-5-2Q15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509937-07	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 08:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-12-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-12-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509937-08	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-12-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-12-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509937-09	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 09:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-12-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-12-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509937-10	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 10:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509937-11	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 11:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509937-12	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 11:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1509937-13	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 12:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1509937-14	**COC Number:**	---	**Receive Date:**	04/24/2015 19:50
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2015 13:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-01 | **Client Sample Name:** JPL-GW, TB-5-4/24/15, 4/24/2015 6:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-01 | **Client Sample Name:** JPL-GW, TB-5-4/24/15, 4/24/2015 6:00:00AM

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-01 | **Client Sample Name:** JPL-GW, TB-5-4/24/15, 4/24/2015 6:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/15	04/28/15 10:16	MGC	MS-V5	1	BYD2370

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-01 | **Client Sample Name:** JPL-GW, TB-5-4/24/15, 4/24/2015 6:00:00AM

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	04/28/15	04/28/15 10:16	MGC	MS-V5	1	BYD2370

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-02 | **Client Sample Name:** JPL-GW, SB-2-4/24/15, 4/24/2015 6:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-02 | **Client Sample Name:** JPL-GW, SB-2-4/24/15, 4/24/2015 6:15:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-02 | **Client Sample Name:** JPL-GW, SB-2-4/24/15, 4/24/2015 6:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	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	04/28/15	04/28/15 10:39	MGC	MS-V5	1	BYD2370

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-02 | **Client Sample Name:** JPL-GW, SB-2-4/24/15, 4/24/2015 6:15:00AM, 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	04/28/15	04/28/15 10:39	MGC	MS-V5	1	BYD2370

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-02 | **Client Sample Name:** JPL-GW, SB-2-4/24/15, 4/24/2015 6:15:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	**0.17**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND	**J**	1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.17**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND	**J**	3
Nitrate as N	**0.024**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**0.27**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND	**J**	3
pH	**4.36**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/05/15 17:25	JRG	PE-OP2	1	BYE0054
2	SM-2320B	04/28/15	04/28/15 20:20	RML	MET-1	1	BYD2440
3	EPA-300.0	04/24/15	04/25/15 02:03	TMS	IC8	1	BYD2248
4	EPA-150.1	04/28/15	04/28/15 20:20	RML	MET-1	1	BYD2440
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	0.667	BYD2531
6	EPA-353.2	04/24/15	04/24/15 22:27	TDC	KONE-1	1	BYD2411
7	EPA-314.0	05/05/15	05/05/15 17:04	BMW	IC6	1	BYE0374

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-02 | **Client Sample Name:** JPL-GW, SB-2-4/24/15, 4/24/2015 6:15:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:00	BMW	KONE-1	1	BYD2409
2	EPA-200.8	05/04/15	05/05/15 00:47	EAR	PE-EL2	1	BYE0198
3	EPA-200.7	05/01/15	05/05/15 17:25	JRG	PE-OP2	1	BYE0054

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-03 | **Client Sample Name:** JPL-GW, EB-5-4/24/15, 4/24/2015 6:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-03 | **Client Sample Name:** JPL-GW, EB-5-4/24/15, 4/24/2015 6:25:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-03 | **Client Sample Name:** JPL-GW, EB-5-4/24/15, 4/24/2015 6:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.0	%	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	04/28/15	04/28/15 11:02	MGC	MS-V5	1	BYD2370

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-03 | **Client Sample Name:** JPL-GW, EB-5-4/24/15, 4/24/2015 6:25:00AM, 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	04/28/15	04/28/15 11:02	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-03 | **Client Sample Name:** JPL-GW, EB-5-4/24/15, 4/24/2015 6:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	**0.16**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND	**J**	1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.22**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND	**J**	3
Nitrate as N	**0.025**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**0.28**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND	**J**	3
pH	**4.46**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/05/15 17:32	JRG	PE-OP2	1	BYE0054
2	SM-2320B	04/28/15	04/28/15 20:26	RML	MET-1	1	BYD2440
3	EPA-300.0	04/24/15	04/25/15 02:20	TMS	IC8	1	BYD2248
4	EPA-150.1	04/28/15	04/28/15 20:26	RML	MET-1	1	BYD2440
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	0.667	BYD2531
6	EPA-353.2	04/24/15	04/24/15 22:27	TDC	KONE-1	1	BYD2411
7	EPA-314.0	05/05/15	05/05/15 17:18	BMW	IC6	1	BYE0374

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-03 | **Client Sample Name:** JPL-GW, EB-5-4/24/15, 4/24/2015 6:25:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:00	BMW	KONE-1	1	BYD2409
2	EPA-200.8	05/04/15	05/05/15 00:50	EAR	PE-EL2	1	BYE0198
3	EPA-200.7	05/01/15	05/05/15 17:32	JRG	PE-OP2	1	BYE0054

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-04 | **Client Sample Name:** JPL-GW, MW-12-5, 4/24/2015 6:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**0.33**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND	**J**	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.26**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-04 | **Client Sample Name:** JPL-GW, MW-12-5, 4/24/2015 6:25:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.070**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-04 | **Client Sample Name:** JPL-GW, MW-12-5, 4/24/2015 6:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.5	%	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	04/28/15	04/28/15 07:36	MGC	MS-V5	1	BYD2370

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Tidewater Inc.
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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-04 | **Client Sample Name:** JPL-GW, MW-12-5, 4/24/2015 6:25:00AM, 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	04/28/15	04/28/15 07:36	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-04 | **Client Sample Name:** JPL-GW, MW-12-5, 4/24/2015 6:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**46**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**13**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**36**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**17**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.7**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**22**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.13**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**300**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.5**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/05/15 17:11	JRG	PE-OP2	1	BYE0054
2	SM-2320B	04/28/15	04/28/15 20:31	RML	MET-1	1	BYD2440
3	EPA-300.0	04/24/15	04/25/15 00:52	BMW	IC8	1	BYD2248
4	EPA-150.1	04/28/15	04/28/15 20:31	RML	MET-1	1	BYD2440
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2531
6	EPA-353.2	04/24/15	04/24/15 22:27	TDC	KONE-1	1	BYD2411
7	EPA-314.0	05/05/15	05/05/15 17:32	BMW	IC6	1	BYE0374

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-04 | **Client Sample Name:** JPL-GW, MW-12-5, 4/24/2015 6:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.00085**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**1.5**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.88**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**100**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:00	BMW	KONE-1	1	BYD2409
2	EPA-200.8	05/04/15	05/04/15 21:05	EAR	PE-EL2	1	BYE0198
3	EPA-200.7	05/01/15	05/05/15 17:11	JRG	PE-OP2	1	BYE0054

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-05 | **Client Sample Name:** JPL-GW, MW-12-4, 4/24/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**2.0**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.96**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-05 | **Client Sample Name:** JPL-GW, MW-12-4, 4/24/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.51**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-05 | **Client Sample Name:** JPL-GW, MW-12-4, 4/24/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.6	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/15	04/28/15 11:24	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-05 | **Client Sample Name:** JPL-GW, MW-12-4, 4/24/2015 7:40:00AM, 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	04/28/15	04/28/15 11:24	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-05 | **Client Sample Name:** JPL-GW, MW-12-4, 4/24/2015 7:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**61**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**16**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**25**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**15**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.3**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**32**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.05**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**300**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.5**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/05/15 17:35	JRG	PE-OP2	1	BYE0054
2	SM-2320B	04/28/15	04/28/15 20:38	RML	MET-1	1	BYD2440
3	EPA-300.0	04/24/15	04/25/15 02:38	BMW	IC8	1	BYD2248
4	EPA-150.1	04/28/15	04/28/15 20:38	RML	MET-1	1	BYD2440
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2531
6	EPA-353.2	04/24/15	04/24/15 22:27	TDC	KONE-1	1	BYD2411
7	EPA-314.0	05/05/15	05/05/15 17:46	BMW	IC6	1	BYE0374

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-05 | **Client Sample Name:** JPL-GW, MW-12-4, 4/24/2015 7:40:00AM, 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 Arsenic	**1.4**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**54**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:00	BMW	KONE-1	1	BYD2409
2	EPA-200.8	05/04/15	05/05/15 00:53	EAR	PE-EL2	1	BYE0198
3	EPA-200.7	05/01/15	05/05/15 17:35	JRG	PE-OP2	1	BYE0054

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-06 | **Client Sample Name:** JPL-GW, DUP-5-2Q15, 4/24/2015 7:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**0.38**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND	**J**	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.47**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-06 | **Client Sample Name:** JPL-GW, DUP-5-2Q15, 4/24/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.18**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-06 | **Client Sample Name:** JPL-GW, DUP-5-2Q15, 4/24/2015 7:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	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	04/28/15	04/28/15 11:47	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-06 | **Client Sample Name:** JPL-GW, DUP-5-2Q15, 4/24/2015 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	04/28/15	04/28/15 11:47	MGC	MS-V5	1	BYD2370

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Tidewater Inc.
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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-06 | **Client Sample Name:** JPL-GW, DUP-5-2Q15, 4/24/2015 7:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**63**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**17**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**25**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**15**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.3**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**32**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.12**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**310**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.3**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/05/15 17:37	JRG	PE-OP2	1	BYE0054
2	SM-2320B	04/28/15	04/28/15 20:45	RML	MET-1	1	BYD2440
3	EPA-300.0	04/24/15	04/25/15 02:55	BMW	IC8	1	BYD2248
4	EPA-150.1	04/28/15	04/28/15 20:45	RML	MET-1	1	BYD2440
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2531
6	EPA-353.2	04/24/15	04/24/15 22:27	TDC	KONE-1	1	BYD2411
7	EPA-314.0	05/05/15	05/05/15 17:59	BMW	IC6	1	BYE0374

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-06 | **Client Sample Name:** JPL-GW, DUP-5-2Q15, 4/24/2015 7:50:00AM, 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 Arsenic	**1.2**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**37**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:00	BMW	KONE-1	1	BYD2409
2	EPA-200.8	05/04/15	05/05/15 00:56	EAR	PE-EL2	1	BYE0198
3	EPA-200.7	05/01/15	05/05/15 17:37	JRG	PE-OP2	1	BYE0054

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-07 | **Client Sample Name:** JPL-GW, MW-12-3, 4/24/2015 8:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.50**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-07 | **Client Sample Name:** JPL-GW, MW-12-3, 4/24/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.11**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.27**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-07 | **Client Sample Name:** JPL-GW, MW-12-3, 4/24/2015 8:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	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	04/28/15	04/28/15 12:10	MGC	MS-V5	1	BYD2370

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-07 | **Client Sample Name:** JPL-GW, MW-12-3, 4/24/2015 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	04/28/15	04/28/15 12:10	MGC	MS-V5	1	BYD2370

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-07 | **Client Sample Name:** JPL-GW, MW-12-3, 4/24/2015 8:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**37**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**16**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**25**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**15**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.033**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**26**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.13**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**260**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/05/15 17:39	JRG	PE-OP2	1	BYE0054
2	SM-2320B	04/28/15	04/28/15 20:52	RML	MET-1	1	BYD2440
3	EPA-300.0	04/24/15	04/25/15 03:48	BMW	IC8	1	BYD2248
4	EPA-150.1	04/28/15	04/28/15 20:52	RML	MET-1	1	BYD2440
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2531
6	EPA-353.2	04/24/15	04/24/15 22:32	TDC	KONE-1	1	BYD2411
7	EPA-314.0	05/05/15	05/05/15 18:13	BMW	IC6	1	BYE0374

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-07 | **Client Sample Name:** JPL-GW, MW-12-3, 4/24/2015 8:25:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**300**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:07	BMW	KONE-1	1	BYD2409
2	EPA-200.8	05/04/15	05/05/15 00:59	EAR	PE-EL2	1	BYE0198
3	EPA-200.7	05/01/15	05/05/15 17:39	JRG	PE-OP2	1	BYE0054

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-08 | **Client Sample Name:** JPL-GW, MW-12-2, 4/24/2015 9:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-08 | **Client Sample Name:** JPL-GW, MW-12-2, 4/24/2015 9:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-08 | **Client Sample Name:** JPL-GW, MW-12-2, 4/24/2015 9:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.1	%	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	04/28/15	04/28/15 12:33	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-08 | **Client Sample Name:** JPL-GW, MW-12-2, 4/24/2015 9:00:00AM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/15	04/28/15 12:33	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-08 | **Client Sample Name:** JPL-GW, MW-12-2, 4/24/2015 9:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**64**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**22**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**26**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.4**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**260**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**23**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.2**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**48**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.86**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**340**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**1.9**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/05/15 17:42	JRG	PE-OP2	1	BYE0054
2	SM-2320B	04/28/15	04/28/15 21:16	RML	MET-1	1	BYD2441
3	EPA-300.0	04/24/15	04/25/15 04:05	BMW	IC8	1	BYD2248
4	EPA-150.1	04/28/15	04/28/15 21:16	RML	MET-1	1	BYD2441
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2531
6	EPA-353.2	04/24/15	04/24/15 22:32	TDC	KONE-1	1	BYD2411
7	EPA-314.0	05/05/15	05/05/15 18:27	BMW	IC6	1	BYE0374

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-08 | **Client Sample Name:** JPL-GW, MW-12-2, 4/24/2015 9:00:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.72**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**1200**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:07	BMW	KONE-1	1	BYD2409
2	EPA-200.8	05/04/15	05/05/15 01:03	EAR	PE-EL2	1	BYE0198
3	EPA-200.7	05/01/15	05/05/15 17:42	JRG	PE-OP2	1	BYE0054

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-09 | **Client Sample Name:** JPL-GW, MW-12-1, 4/24/2015 9:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-09 | **Client Sample Name:** JPL-GW, MW-12-1, 4/24/2015 9:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	**0.13**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-09 | **Client Sample Name:** JPL-GW, MW-12-1, 4/24/2015 9:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.5	%	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	04/28/15	04/28/15 12:56	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-09 | **Client Sample Name:** JPL-GW, MW-12-1, 4/24/2015 9:30:00AM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/15	04/28/15 12:56	MGC	MS-V5	1	BYD2370

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-09 | **Client Sample Name:** JPL-GW, MW-12-1, 4/24/2015 9:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**67**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**24**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**27**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**260**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**220**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**25**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.47**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**50**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.82**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**360**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/05/15 17:44	JRG	PE-OP2	1	BYE0054
2	SM-2320B	04/28/15	04/28/15 21:30	RML	MET-1	1	BYD2441
3	EPA-300.0	04/24/15	04/25/15 04:23	BMW	IC8	1	BYD2248
4	EPA-150.1	04/28/15	04/28/15 21:30	RML	MET-1	1	BYD2441
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2531
6	EPA-353.2	04/24/15	04/24/15 22:32	TDC	KONE-1	1	BYD2411
7	EPA-314.0	05/05/15	05/06/15 00:46	BMW	IC6	1	BYE0374

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-09 | **Client Sample Name:** JPL-GW, MW-12-1, 4/24/2015 9:30:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**190**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:07	BMW	KONE-1	1	BYD2409
2	EPA-200.8	05/04/15	05/05/15 01:06	EAR	PE-EL2	1	BYE0198
3	EPA-200.7	05/01/15	05/05/15 17:44	JRG	PE-OP2	1	BYE0054

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-10 | **Client Sample Name:** JPL-GW, MW-19-5, 4/24/2015 10:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.24**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-10 | **Client Sample Name:** JPL-GW, MW-19-5, 4/24/2015 10:25:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.070**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.51**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-10 | **Client Sample Name:** JPL-GW, MW-19-5, 4/24/2015 10:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.9	%	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	04/28/15	04/28/15 13:18	MGC	MS-V5	1	BYD2370

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-10 | **Client Sample Name:** JPL-GW, MW-19-5, 4/24/2015 10:25:00AM, 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	04/28/15	04/28/15 13:18	MGC	MS-V5	1	BYD2370

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-10 | **Client Sample Name:** JPL-GW, MW-19-5, 4/24/2015 10:25:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**59**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**28**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**31**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**47**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**7.2**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**46**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.10**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**410**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	**0.013**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND	**J**	6
Perchlorate	**2.8**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/05/15 17:47	JRG	PE-OP2	1	BYE0054
2	SM-2320B	04/28/15	04/28/15 21:37	RML	MET-1	1	BYD2441
3	EPA-300.0	04/24/15	04/25/15 04:40	BMW	IC8	1	BYD2248
4	EPA-150.1	04/28/15	04/28/15 21:37	RML	MET-1	1	BYD2441
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2531
6	EPA-353.2	04/24/15	04/24/15 22:32	TDC	KONE-1	1	BYD2411
7	EPA-314.0	05/05/15	05/06/15 00:59	BMW	IC6	1	BYE0374

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-10 | **Client Sample Name:** JPL-GW, MW-19-5, 4/24/2015 10:25:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**56**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:07	BMW	KONE-1	1	BYD2409
2	EPA-200.8	05/04/15	05/05/15 01:09	EAR	PE-EL2	1	BYE0198
3	EPA-200.7	05/01/15	05/05/15 17:47	JRG	PE-OP2	1	BYE0054

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-11 | **Client Sample Name:** JPL-GW, MW-19-4, 4/24/2015 11:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.14**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-11 | **Client Sample Name:** JPL-GW, MW-19-4, 4/24/2015 11:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.26**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-11 | **Client Sample Name:** JPL-GW, MW-19-4, 4/24/2015 11:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	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)	98.0	%	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	04/28/15	04/28/15 13:41	MGC	MS-V5	1	BYD2370

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-11 | **Client Sample Name:** JPL-GW, MW-19-4, 4/24/2015 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	04/28/15	04/28/15 13:41	MGC	MS-V5	1	BYD2370

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-11 | **Client Sample Name:** JPL-GW, MW-19-4, 4/24/2015 11:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**49**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**26**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**30**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**42**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**7.5**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**39**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.11**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**380**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.3**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/05/15 17:49	JRG	PE-OP2	1	BYE0054
2	SM-2320B	04/28/15	04/28/15 21:44	RML	MET-1	1	BYD2441
3	EPA-300.0	04/24/15	04/25/15 04:58	BMW	IC8	1	BYD2248
4	EPA-150.1	04/28/15	04/28/15 21:44	RML	MET-1	1	BYD2441
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2531
6	EPA-353.2	04/24/15	04/24/15 22:32	TDC	KONE-1	1	BYD2411
7	EPA-314.0	05/05/15	05/06/15 01:13	BMW	IC6	1	BYE0290

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-11 | **Client Sample Name:** JPL-GW, MW-19-4, 4/24/2015 11:00:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**28**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:07	BMW	KONE-1	1	BYD2409
2	EPA-200.8	05/04/15	05/05/15 01:12	EAR	PE-EL2	1	BYE0198
3	EPA-200.7	05/01/15	05/05/15 17:49	JRG	PE-OP2	1	BYE0054

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-12 | **Client Sample Name:** JPL-GW, MW-19-3, 4/24/2015 11:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.28**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-12 | **Client Sample Name:** JPL-GW, MW-19-3, 4/24/2015 11:35:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.45**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.11**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-12 | **Client Sample Name:** JPL-GW, MW-19-3, 4/24/2015 11:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.2	%	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	04/28/15	04/28/15 14:04	MGC	MS-V5	1	BYD2370

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-12 | **Client Sample Name:** JPL-GW, MW-19-3, 4/24/2015 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	04/28/15	04/28/15 14:04	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-12 | **Client Sample Name:** JPL-GW, MW-19-3, 4/24/2015 11:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**79**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**30**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.021		1
Total Recoverable Sodium	**32**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.056		1
Total Recoverable Potassium	**2.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**61**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**11**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**62**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.83**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**500**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**4.1**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/04/15 20:57	JRG	PE-OP2	1	BYE0053
2	SM-2320B	04/28/15	04/28/15 21:51	RML	MET-1	1	BYD2441
3	EPA-300.0	04/24/15	04/25/15 05:50	BMW	IC8	1	BYD2249
4	EPA-150.1	04/28/15	04/28/15 21:51	RML	MET-1	1	BYD2441
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	3.333	BYD2532
6	EPA-353.2	04/24/15	04/24/15 22:32	TDC	KONE-1	1	BYD2445
7	EPA-314.0	05/05/15	05/06/15 01:27	BMW	IC6	1	BYE0290

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-12 | **Client Sample Name:** JPL-GW, MW-19-3, 4/24/2015 11:35:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**3.0**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.6		2
Total Recoverable Iron	**210**	**ug/L**	**50**	**6.5**	**EPA-200.7**	33		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:07	BMW	KONE-1	1	BYD2410
2	EPA-200.8	05/04/15	05/04/15 19:46	EAR	PE-EL2	1	BYE0201
3	EPA-200.7	05/01/15	05/06/15 15:19	JRG	PE-OP2	1	BYE0053

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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-13 | **Client Sample Name:** JPL-GW, MW-19-2, 4/24/2015 12:05:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**0.37**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**2.1**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	**0.080**	**ug/L**	**0.50**	**0.072**	**EPA-524.2**	ND	**J**	1
1,3-Dichlorobenzene	**0.18**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,4-Dichlorobenzene	**0.070**	**ug/L**	**0.50**	**0.062**	**EPA-524.2**	ND	**J**	1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.42**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.42**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-13 | **Client Sample Name:** JPL-GW, MW-19-2, 4/24/2015 12:05:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**2.9**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	**0.22**	**ug/L**	**0.50**	**0.16**	**EPA-524.2**	ND	**J**	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**3.5**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-13 | **Client Sample Name:** JPL-GW, MW-19-2, 4/24/2015 12:05:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/15	04/28/15 14:27	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-13 | **Client Sample Name:** JPL-GW, MW-19-2, 4/24/2015 12:05:00PM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/15	04/28/15 14:27	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-13 | **Client Sample Name:** JPL-GW, MW-19-2, 4/24/2015 12:05:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**120**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**45**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.021		1
Total Recoverable Sodium	**36**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.056		1
Total Recoverable Potassium	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**290**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**240**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**100**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**14**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**140**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.89**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**660**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**5.0**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/04/15 21:00	JRG	PE-OP2	1	BYE0053
2	SM-2320B	04/28/15	04/28/15 21:57	RML	MET-1	2	BYD2441
3	EPA-300.0	04/24/15	04/25/15 07:35	BMW	IC8	1	BYD2249
4	EPA-150.1	04/28/15	04/28/15 21:57	RML	MET-1	1	BYD2441
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	3.333	BYD2532
6	EPA-353.2	04/24/15	04/24/15 22:36	TDC	KONE-1	1	BYD2445
7	EPA-314.0	05/05/15	05/06/15 01:55	BMW	IC6	1	BYE0290

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-13 | **Client Sample Name:** JPL-GW, MW-19-2, 4/24/2015 12:05:00PM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.77**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.6	**J**	2
Total Recoverable Iron	**690**	**ug/L**	**50**	**6.5**	**EPA-200.7**	33		3
Total Recoverable Lead	**0.20**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:10	BMW	KONE-1	1	BYD2410
2	EPA-200.8	05/04/15	05/05/15 00:15	EAR	PE-EL2	1	BYE0201
3	EPA-200.7	05/01/15	05/06/15 15:21	JRG	PE-OP2	1	BYE0053

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-14 | **Client Sample Name:** JPL-GW, MW-19-1, 4/24/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.94**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-14 | **Client Sample Name:** JPL-GW, MW-19-1, 4/24/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1509937-14 | **Client Sample Name:** JPL-GW, MW-19-1, 4/24/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.7	%	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	04/28/15	04/28/15 14:50	MGC	MS-V5	1	BYD2370

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1509937-14 | **Client Sample Name:** JPL-GW, MW-19-1, 4/24/2015 1:20:00PM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/15	04/28/15 14:50	MGC	MS-V5	1	BYD2370

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1509937-14 | **Client Sample Name:** JPL-GW, MW-19-1, 4/24/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**75**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**28**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.021		1
Total Recoverable Sodium	**20**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.056		1
Total Recoverable Potassium	**3.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**310**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**250**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**35**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.2**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**45**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.04**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**390**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	**0.034**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND	**J**	6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/15	05/04/15 21:02	JRG	PE-OP2	1	BYE0053
2	SM-2320B	04/28/15	04/28/15 22:04	RML	MET-1	1	BYD2441
3	EPA-300.0	04/24/15	04/25/15 07:53	BMW	IC8	1	BYD2249
4	EPA-150.1	04/28/15	04/28/15 22:04	RML	MET-1	1	BYD2441
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2532
6	EPA-353.2	04/24/15	04/24/15 22:36	TDC	KONE-1	1	BYD2445
7	EPA-314.0	05/05/15	05/06/15 02:22	BMW	IC6	1	BYE0290

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1509937-14 | **Client Sample Name:** JPL-GW, MW-19-1, 4/24/2015 1:20:00PM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	1.6		2
Total Recoverable Iron	**380**	**ug/L**	**50**	**6.5**	**EPA-200.7**	33		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/15	04/24/15 23:10	BMW	KONE-1	1	BYD2410
2	EPA-200.8	05/04/15	05/05/15 00:18	EAR	PE-EL2	1	BYE0201
3	EPA-200.7	05/01/15	05/06/15 15:23	JRG	PE-OP2	1	BYE0053

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2370						
Benzene	BYD2370-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYD2370-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYD2370-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYD2370-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYD2370-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYD2370-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYD2370-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYD2370-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYD2370-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYD2370-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYD2370-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYD2370-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYD2370-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYD2370-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYD2370-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYD2370-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYD2370-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYD2370-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYD2370-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYD2370-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYD2370-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYD2370-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYD2370-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYD2370-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYD2370-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYD2370-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYD2370-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYD2370-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYD2370-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYD2370-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYD2370-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYD2370-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYD2370-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYD2370-BLK1	ND	ug/L	0.50	0.14	

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2370						
trans-1,3-Dichloropropene	BYD2370-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYD2370-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYD2370-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYD2370-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYD2370-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYD2370-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BYD2370-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYD2370-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYD2370-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYD2370-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYD2370-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYD2370-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYD2370-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYD2370-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYD2370-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYD2370-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYD2370-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYD2370-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYD2370-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYD2370-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYD2370-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYD2370-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYD2370-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYD2370-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYD2370-BLK1	ND	ug/L	0.50	0.12	
Acetone	BYD2370-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BYD2370-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BYD2370-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BYD2370-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BYD2370-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BYD2370-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BYD2370-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BYD2370-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BYD2370-BLK1	ND	ug/L	4.0	0.97	

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2370						
Ethyl t-butyl ether	BYD2370-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BYD2370-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BYD2370-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BYD2370-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BYD2370-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BYD2370-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BYD2370-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BYD2370-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BYD2370-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BYD2370-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BYD2370-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BYD2370-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYD2370-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYD2370-BLK1**	**97.1**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYD2370-BLK1**	**99.6**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYD2370-BLK1**	**97.3**	%	**80 - 120 (LCL - UCL)**		

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2370										
Benzene	BYD2370-BS1	LCS	23.470	25.000	ug/L	93.9		70 - 130		
Bromodichloromethane	BYD2370-BS1	LCS	25.820	25.000	ug/L	103		70 - 130		
Chlorobenzene	BYD2370-BS1	LCS	25.820	25.000	ug/L	103		70 - 130		
Chloroethane	BYD2370-BS1	LCS	23.050	25.000	ug/L	92.2		70 - 130		
1,4-Dichlorobenzene	BYD2370-BS1	LCS	25.890	25.000	ug/L	104		70 - 130		
1,1-Dichloroethane	BYD2370-BS1	LCS	23.160	25.000	ug/L	92.6		70 - 130		
1,1-Dichloroethene	BYD2370-BS1	LCS	25.080	25.000	ug/L	100		70 - 130		
Toluene	BYD2370-BS1	LCS	24.810	25.000	ug/L	99.2		70 - 130		
Trichloroethene	BYD2370-BS1	LCS	26.180	25.000	ug/L	105		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYD2370-BS1	LCS	9.4900	10.000	ug/L	94.9		75 - 125		
Toluene-d8 (Surrogate)	BYD2370-BS1	LCS	10.030	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYD2370-BS1	LCS	9.9500	10.000	ug/L	99.5		80 - 120		

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2370	Used client sample: Y - Description: MW-12-5, 04/24/2015 06:25										
Benzene	MS	1509937-04	ND	23.650	25.000	ug/L		94.6		70 - 130	
	MSD	1509937-04	ND	23.970	25.000	ug/L	1.3	95.9	20	70 - 130	
Bromodichloromethane	MS	1509937-04	ND	25.510	25.000	ug/L		102		70 - 130	
	MSD	1509937-04	ND	25.610	25.000	ug/L	0.4	102	20	70 - 130	
Chlorobenzene	MS	1509937-04	ND	25.700	25.000	ug/L		103		70 - 130	
	MSD	1509937-04	ND	25.330	25.000	ug/L	1.5	101	20	70 - 130	
Chloroethane	MS	1509937-04	ND	23.610	25.000	ug/L		94.4		70 - 130	
	MSD	1509937-04	ND	23.750	25.000	ug/L	0.6	95.0	20	70 - 130	
1,4-Dichlorobenzene	MS	1509937-04	ND	25.790	25.000	ug/L		103		70 - 130	
	MSD	1509937-04	ND	24.890	25.000	ug/L	3.6	99.6	20	70 - 130	
1,1-Dichloroethane	MS	1509937-04	ND	23.180	25.000	ug/L		92.7		70 - 130	
	MSD	1509937-04	ND	23.470	25.000	ug/L	1.2	93.9	20	70 - 130	
1,1-Dichloroethene	MS	1509937-04	ND	25.000	25.000	ug/L		100		70 - 130	
	MSD	1509937-04	ND	24.980	25.000	ug/L	0.1	99.9	20	70 - 130	
Toluene	MS	1509937-04	ND	24.830	25.000	ug/L		99.3		70 - 130	
	MSD	1509937-04	ND	24.520	25.000	ug/L	1.3	98.1	20	70 - 130	
Trichloroethene	MS	1509937-04	ND	26.230	25.000	ug/L		105		70 - 130	
	MSD	1509937-04	ND	25.970	25.000	ug/L	1.0	104	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1509937-04	ND	9.5000	10.000	ug/L		95.0		75 - 125	
	MSD	1509937-04	ND	9.6500	10.000	ug/L	1.6	96.5		75 - 125	
Toluene-d8 (Surrogate)	MS	1509937-04	ND	9.8300	10.000	ug/L		98.3		80 - 120	
	MSD	1509937-04	ND	9.9600	10.000	ug/L	1.3	99.6		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1509937-04	ND	9.5800	10.000	ug/L		95.8		80 - 120	
	MSD	1509937-04	ND	9.6800	10.000	ug/L	1.0	96.8		80 - 120	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2370						
Chloroacetonitrile	BYD2370-BLK1	0	ug/L			
1-Chlorobutane	BYD2370-BLK1	0	ug/L			
1,1-Dichloropropanone	BYD2370-BLK1	0	ug/L			
Methyl acrylate	BYD2370-BLK1	0	ug/L			
Nitrobenzene	BYD2370-BLK1	0	ug/L			
2-Nitropropane	BYD2370-BLK1	0	ug/L			

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2248						
Chloride	BYD2248-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD2248-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD2248-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD2249						
Chloride	BYD2249-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD2249-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD2249-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD2411						
Nitrite as N	BYD2411-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD2440						
Bicarbonate	BYD2440-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2440-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2440-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2441						
Bicarbonate	BYD2441-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2441-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2441-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2445						
Nitrite as N	BYD2445-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD2531						
Total Dissolved Solids @ 180 C	BYD2531-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYD2532						
Total Dissolved Solids @ 180 C	BYD2532-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYE0053						
Total Recoverable Calcium	BYE0053-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	**BYE0053-BLK1**	**0.021390**	**mg/L**	**0.050**	**0.019**	**J**
Total Recoverable Sodium	**BYE0053-BLK1**	**0.055527**	**mg/L**	**0.50**	**0.017**	**J**
Total Recoverable Potassium	BYE0053-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE0054						
Total Recoverable Calcium	BYE0054-BLK1	ND	mg/L	0.10	0.014	

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYE0054						
Total Recoverable Magnesium	BYE0054-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	BYE0054-BLK1	ND	mg/L	0.50	0.017	
Total Recoverable Potassium	BYE0054-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE0290						
Perchlorate	BYE0290-BLK1	ND	ug/L	4.0	1.3	
QC Batch ID: BYE0374						
Perchlorate	BYE0374-BLK1	ND	ug/L	4.0	1.3	

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2248										
Chloride	BYD2248-BS1	LCS	47.099	50.000	mg/L	94.2		90 - 110		
Nitrate as N	BYD2248-BS1	LCS	4.6770	5.0000	mg/L	93.5		90 - 110		
Sulfate	BYD2248-BS1	LCS	93.784	100.00	mg/L	93.8		90 - 110		
QC Batch ID: BYD2249										
Chloride	BYD2249-BS1	LCS	47.282	50.000	mg/L	94.6		90 - 110		
Nitrate as N	BYD2249-BS1	LCS	4.6870	5.0000	mg/L	93.7		90 - 110		
Sulfate	BYD2249-BS1	LCS	94.129	100.00	mg/L	94.1		90 - 110		
QC Batch ID: BYD2411										
Nitrite as N	BYD2411-BS1	LCS	0.53764	0.50000	mg/L	108		90 - 110		
QC Batch ID: BYD2440										
Total Alkalinity as CaCO3	BYD2440-BS3	LCS	100.56	100.00	mg/L	101		90 - 110		
pH	BYD2440-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD2441										
Total Alkalinity as CaCO3	BYD2441-BS3	LCS	104.21	100.00	mg/L	104		90 - 110		
pH	BYD2441-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD2445										
Nitrite as N	BYD2445-BS1	LCS	0.53480	0.50000	mg/L	107		90 - 110		
QC Batch ID: BYD2531										
Total Dissolved Solids @ 180 C	BYD2531-BS1	LCS	550.00	586.00	mg/L	93.9		90 - 110		
QC Batch ID: BYD2532										
Total Dissolved Solids @ 180 C	BYD2532-BS1	LCS	600.00	586.00	mg/L	102		90 - 110		
QC Batch ID: BYE0053										
Total Recoverable Calcium	BYE0053-BS1	LCS	9.8908	10.000	mg/L	98.9		85 - 115		
Total Recoverable Magnesium	BYE0053-BS1	LCS	10.480	10.000	mg/L	105		85 - 115		
Total Recoverable Sodium	BYE0053-BS1	LCS	10.045	10.000	mg/L	100		85 - 115		
Total Recoverable Potassium	BYE0053-BS1	LCS	9.8047	10.000	mg/L	98.0		85 - 115		
QC Batch ID: BYE0054										
Total Recoverable Calcium	BYE0054-BS1	LCS	10.631	10.000	mg/L	106		85 - 115		
Total Recoverable Magnesium	BYE0054-BS1	LCS	11.198	10.000	mg/L	112		85 - 115		
Total Recoverable Sodium	BYE0054-BS1	LCS	10.634	10.000	mg/L	106		85 - 115		
Total Recoverable Potassium	BYE0054-BS1	LCS	10.400	10.000	mg/L	104		85 - 115		
QC Batch ID: BYE0290										

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0290										
Perchlorate	BYE0290-BS1	LCS	9.7996	10.000	ug/L	98.0		85 - 115		
QC Batch ID: BYE0374										
Perchlorate	BYE0374-BS1	LCS	10.502	10.000	ug/L	105		85 - 115		

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2248	Used client sample: Y - Description: MW-12-5, 04/24/2015 06:25										
Chloride	DUP	1509937-04	16.939	16.906		mg/L	0.2		10		
	MS	1509937-04	16.939	72.397	50.505	mg/L		110		80 - 120	
	MSD	1509937-04	16.939	71.941	50.505	mg/L	0.6	109	10	80 - 120	
Nitrate as N	DUP	1509937-04	1.7140	1.7090		mg/L	0.3		10		
	MS	1509937-04	1.7140	7.1010	5.0505	mg/L		107		80 - 120	
	MSD	1509937-04	1.7140	7.1535	5.0505	mg/L	0.7	108	10	80 - 120	
Sulfate	DUP	1509937-04	22.299	22.252		mg/L	0.2		10		
	MS	1509937-04	22.299	131.37	101.01	mg/L		108		80 - 120	
	MSD	1509937-04	22.299	131.67	101.01	mg/L	0.2	108	10	80 - 120	
QC Batch ID: BYD2249	Used client sample: Y - Description: MW-19-3, 04/24/2015 11:35										
Chloride	DUP	1509937-12	60.665	60.445		mg/L	0.4		10		
	MS	1509937-12	60.665	114.25	50.505	mg/L		106		80 - 120	
	MSD	1509937-12	60.665	114.30	50.505	mg/L	0.0	106	10	80 - 120	
Nitrate as N	DUP	1509937-12	10.958	10.911		mg/L	0.4		10		
	MS	1509937-12	10.958	16.108	5.0505	mg/L		102		80 - 120	
	MSD	1509937-12	10.958	16.109	5.0505	mg/L	0.0	102	10	80 - 120	
Sulfate	DUP	1509937-12	62.388	62.545		mg/L	0.3		10		
	MS	1509937-12	62.388	173.61	101.01	mg/L		110		80 - 120	
	MSD	1509937-12	62.388	173.49	101.01	mg/L	0.1	110	10	80 - 120	
QC Batch ID: BYD2411	Used client sample: Y - Description: MW-12-5, 04/24/2015 06:25										
Nitrite as N	DUP	1509937-04	ND	ND		mg/L			10		
	MS	1509937-04	ND	0.52342	0.52632	mg/L		99.5		90 - 110	
	MSD	1509937-04	ND	0.52686	0.52632	mg/L	0.7	100	10	90 - 110	
QC Batch ID: BYD2440	Used client sample: N										
Bicarbonate	DUP	1509930-05	542.75	535.32		mg/L	1.4		10		
Carbonate	DUP	1509930-05	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1509930-05	445.14	439.05		mg/L	1.4		10		
pH	DUP	1509930-05	8.0300	8.0600		pH Units	0.4		20		
QC Batch ID: BYD2441	Used client sample: Y - Description: MW-12-2, 04/24/2015 09:00										
Bicarbonate	DUP	1509937-08	260.24	254.87		mg/L	2.1		10		
Carbonate	DUP	1509937-08	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1509937-08	213.44	209.03		mg/L	2.1		10		
pH	DUP	1509937-08	7.8600	7.8600		pH Units	0		20		
QC Batch ID: BYD2445	Used client sample: Y - Description: MW-19-3, 04/24/2015 11:35										

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Tidewater Inc.
3761 Attucks Drive
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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2445	Used client sample: Y - Description: MW-19-3, 04/24/2015 11:35										
Nitrite as N	DUP	1509937-12	ND	ND		mg/L			10		
	MS	1509937-12	ND	0.53295	0.52632	mg/L		101		90 - 110	
	MSD	1509937-12	ND	0.53775	0.52632	mg/L	0.9	102	10	90 - 110	
QC Batch ID: BYD2531	Used client sample: Y - Description: MW-12-5, 04/24/2015 06:25										
Total Dissolved Solids @ 180 C	DUP	1509937-04	300.00	296.00		mg/L	1.3		10		
QC Batch ID: BYD2532	Used client sample: Y - Description: MW-23-1, 04/27/2015 09:10										
Total Dissolved Solids @ 180 C	DUP	1510030-07	815.00	815.00		mg/L	0		10		
QC Batch ID: BYE0053	Used client sample: Y - Description: MW-26-2, 04/23/2015 13:40										
Total Recoverable Calcium	DUP	**1509842-15**	**53.997**	**54.147**		**mg/L**	**0.3**		**20**		
	MS	**1509842-15**	**53.997**	**61.496**	**10.000**	**mg/L**		**75.0**		**75 - 125**	
	MSD	**1509842-15**	**53.997**	**60.365**	**10.000**	**mg/L**	**1.9**	**63.7**	**20**	**75 - 125**	**A03**
Total Recoverable Magnesium	DUP	1509842-15	31.783	31.943		mg/L	0.5		20		
	MS	1509842-15	31.783	40.922	10.000	mg/L		91.4		75 - 125	
	MSD	1509842-15	31.783	40.046	10.000	mg/L	2.2	82.6	20	75 - 125	
Total Recoverable Sodium	DUP	**1509842-15**	**43.222**	**43.303**		**mg/L**	**0.2**		**20**		
	MS	**1509842-15**	**43.222**	**51.544**	**10.000**	**mg/L**		**83.2**		**75 - 125**	
	MSD	**1509842-15**	**43.222**	**50.629**	**10.000**	**mg/L**	**1.8**	**74.1**	**20**	**75 - 125**	**A03**
Total Recoverable Potassium	DUP	1509842-15	2.9992	3.0647		mg/L	2.2		20		
	MS	1509842-15	2.9992	13.368	10.000	mg/L		104		75 - 125	
	MSD	1509842-15	2.9992	12.725	10.000	mg/L	4.9	97.3	20	75 - 125	
QC Batch ID: BYE0054	Used client sample: Y - Description: MW-12-5, 04/24/2015 06:25										
Total Recoverable Calcium	DUP	1509937-04	45.928	47.221		mg/L	2.8		20		
	MS	1509937-04	45.928	56.161	10.000	mg/L		102		75 - 125	
	MSD	1509937-04	45.928	55.296	10.000	mg/L	1.6	93.7	20	75 - 125	
Total Recoverable Magnesium	DUP	1509937-04	13.453	13.801		mg/L	2.6		20		
	MS	1509937-04	13.453	24.738	10.000	mg/L		113		75 - 125	
	MSD	1509937-04	13.453	24.073	10.000	mg/L	2.7	106	20	75 - 125	
Total Recoverable Sodium	DUP	1509937-04	35.881	36.893		mg/L	2.8		20		
	MS	1509937-04	35.881	46.070	10.000	mg/L		102		75 - 125	
	MSD	1509937-04	35.881	45.504	10.000	mg/L	1.2	96.2	20	75 - 125	
Total Recoverable Potassium	DUP	1509937-04	2.0012	2.0893		mg/L	4.3		20		
	MS	1509937-04	2.0012	12.739	10.000	mg/L		107		75 - 125	
	MSD	1509937-04	2.0012	12.340	10.000	mg/L	3.2	103	20	75 - 125	
QC Batch ID: BYE0290	Used client sample: Y - Description: MW-25-2, 04/23/2015 12:20										
Perchlorate	DUP	1509842-12	14.083	13.579		ug/L	3.6		15		
	MS	1509842-12	14.083	34.509	20.202	ug/L		101		80 - 120	
	MSD	1509842-12	14.083	33.428	20.202	ug/L	3.2	95.8	15	80 - 120	

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Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0374	Used client sample: Y - Description: MW-12-5, 04/24/2015 06:25										
Perchlorate	DUP	1509937-04	2.7166	2.6458		ug/L	2.6		15		J
	MS	1509937-04	2.7166	23.319	20.202	ug/L		102		80 - 120	
	MSD	1509937-04	2.7166	22.818	20.202	ug/L	2.2	99.5	15	80 - 120	

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Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2409						
Hexavalent Chromium	BYD2409-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYD2410						
Hexavalent Chromium	BYD2410-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYE0053						
Total Recoverable Iron	**BYE0053-BLK2**	**32.503**	**ug/L**	**50**	**6.5**	**J**
QC Batch ID: BYE0054						
Total Recoverable Iron	BYE0054-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BYE0198						
Total Recoverable Arsenic	BYE0198-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BYE0198-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BYE0198-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYE0201						
Total Recoverable Arsenic	BYE0201-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	**BYE0201-BLK1**	**1.5600**	**ug/L**	**3.0**	**0.50**	**J**
Total Recoverable Lead	BYE0201-BLK1	ND	ug/L	1.0	0.10	

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Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2409										
Hexavalent Chromium	BYD2409-BS1	LCS	0.050801	0.050000	mg/L	102		85 - 115		
QC Batch ID: BYD2410										
Hexavalent Chromium	BYD2410-BS1	LCS	0.049913	0.050000	mg/L	99.8		85 - 115		
QC Batch ID: BYE0053										
Total Recoverable Iron	BYE0053-BS2	LCS	1135.9	1000.0	ug/L	114		85 - 115		
QC Batch ID: BYE0054										
Total Recoverable Iron	BYE0054-BS1	LCS	1123.9	1000.0	ug/L	112		85 - 115		
QC Batch ID: BYE0198										
Total Recoverable Arsenic	BYE0198-BS1	LCS	105.54	100.00	ug/L	106		85 - 115		
Total Recoverable Chromium	BYE0198-BS1	LCS	40.993	40.000	ug/L	102		85 - 115		
Total Recoverable Lead	BYE0198-BS1	LCS	99.007	100.00	ug/L	99.0		85 - 115		
QC Batch ID: BYE0201										
Total Recoverable Arsenic	BYE0201-BS1	LCS	106.11	100.00	ug/L	106		85 - 115		
Total Recoverable Chromium	BYE0201-BS1	LCS	44.445	40.000	ug/L	111		85 - 115		
Total Recoverable Lead	BYE0201-BS1	LCS	101.36	100.00	ug/L	101		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/11/2015 15:14
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2409	Used client sample: Y - Description: MW-12-5, 04/24/2015 06:25										
Hexavalent Chromium	DUP	**1509937-04**	**0.00085400**	**0.00070500**		**mg/L**	**19.1**		**10**		**J,A02**
	MS	**1509937-04**	**0.00085400**	**0.052291**	**0.052632**	**mg/L**		**97.7**		**85 - 115**	
	MSD	**1509937-04**	**0.00085400**	**0.052139**	**0.052632**	**mg/L**	**0.3**	**97.4**	**10**	**85 - 115**	
QC Batch ID: BYD2410	Used client sample: Y - Description: MW-19-3, 04/24/2015 11:35										
Hexavalent Chromium	DUP	1509937-12	0.0016170	0.0016330		mg/L	1.0		10		J
	MS	1509937-12	0.0016170	0.054085	0.052632	mg/L		99.7		85 - 115	
	MSD	1509937-12	0.0016170	0.054091	0.052632	mg/L	0.0	99.7	10	85 - 115	
QC Batch ID: BYE0053	Used client sample: Y - Description: MW-26-2, 04/23/2015 13:40										
Total Recoverable Iron	DUP	1509842-15	1038.0	1002.1		ug/L	3.5		20		
	MS	1509842-15	1038.0	2056.9	1000.0	ug/L		102		75 - 125	
	MSD	1509842-15	1038.0	1988.2	1000.0	ug/L	3.4	95.0	20	75 - 125	
QC Batch ID: BYE0054	Used client sample: Y - Description: MW-12-5, 04/24/2015 06:25										
Total Recoverable Iron	DUP	**1509937-04**	**103.27**	**53.251**		**ug/L**	**63.9**		**20**		**A02**
	MS	**1509937-04**	**103.27**	**1208.4**	**1000.0**	**ug/L**		**111**		**75 - 125**	
	MSD	**1509937-04**	**103.27**	**1159.2**	**1000.0**	**ug/L**	**4.2**	**106**	**20**	**75 - 125**	
QC Batch ID: BYE0198	Used client sample: Y - Description: MW-12-5, 04/24/2015 06:25										
Total Recoverable Arsenic	DUP	1509937-04	1.4650	1.6210		ug/L	10.1		20		J
	MS	1509937-04	1.4650	103.30	100.00	ug/L		102		70 - 130	
	MSD	1509937-04	1.4650	103.81	100.00	ug/L	0.5	102	20	70 - 130	
Total Recoverable Chromium	DUP	1509937-04	0.88400	0.97400		ug/L	9.7		20		J
	MS	1509937-04	0.88400	39.741	40.000	ug/L		97.1		70 - 130	
	MSD	1509937-04	0.88400	38.447	40.000	ug/L	3.3	93.9	20	70 - 130	
Total Recoverable Lead	DUP	1509937-04	ND	ND		ug/L			20		
	MS	1509937-04	ND	95.390	100.00	ug/L		95.4		70 - 130	
	MSD	1509937-04	ND	93.110	100.00	ug/L	2.4	93.1	20	70 - 130	
QC Batch ID: BYE0201	Used client sample: Y - Description: MW-19-3, 04/24/2015 11:35										
Total Recoverable Arsenic	DUP	1509937-12	ND	ND		ug/L			20		
	MS	1509937-12	ND	107.85	100.00	ug/L		108		70 - 130	
	MSD	1509937-12	ND	110.05	100.00	ug/L	2.0	110	20	70 - 130	
Total Recoverable Chromium	DUP	1509937-12	3.0050	2.9720		ug/L	1.1		20		J
	MS	1509937-12	3.0050	41.118	40.000	ug/L		95.3		70 - 130	
	MSD	1509937-12	3.0050	41.117	40.000	ug/L	0.0	95.3	20	70 - 130	
Total Recoverable Lead	DUP	1509937-12	ND	ND		ug/L			20		
	MS	1509937-12	ND	91.237	100.00	ug/L		91.2		70 - 130	
	MSD	1509937-12	ND	94.712	100.00	ug/L	3.7	94.7	20	70 - 130	

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Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/11/2015 15:14 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A02	The difference between duplicate readings is less than the quantitation limit.
A03	The sample concentration is more than 4 times the spike level.
S05	The sample holding time was exceeded.

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Date of Report: 05/15/2015

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 2nd Qtr. 2015
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1510030
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 4/27/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.

Chain of Custody Form

*Required Fields

Page 1 of 2

Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:*(614) 792 - 2897 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-10030

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)	Notes
-1	TB-Co-4/27/15	4.27.15	0600	AQ	X									
-2	EB-Co-4/27/15		0620		X	X	X	X	X	X				
-3	MW-23-5		0650		X	X	X	X	X	X				
-4	MW-23-4		0730		X	X	X	X	X	X				
-5	MW-23-3		0805		X	X	X	X	X	X				
-6	MW-23-2		0835		X	X	X	X	X	X				
-7	MW-23-1		0910		X	X	X	X	X	X				
-8	MW-3-5		1000		X	X	X	X	X	X				
-9	DUP-6-2015		1010		X	X	X	X	X	X				
-10	MW-3-4		1100		X	X	X	X	X	X				
-11	MW-3-3	↓	1135	↓	X	X	X	X	X	X				

Level IV

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT ☐

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

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

Lab TAT Approval: _____ *Additional Charges May Apply

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

Relinquished By:	Date	Time	Received By:	Date	Time
1.	4-27-15	1515	1.	4/27/15	16:14
2.	4/27/15	19:20	2.	4-27-15	19:20
3.			3.		

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.

Chain of Custody Form

*Required Fields

Page 2 of 2

Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:* (614) 792 - 2897 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-10030

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)		Notes
-12	MW-3-2	4-27-15	1210	GW	X	X	X	X	X	X					
-13	MW-3-1	↓	1320	↓	X	X	X	X	X	X					Level IV

Analysis Requested

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

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

Lab TAT Approval: _____ *Additional Charges May Apply

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By:	4-27-15	1515	1.Received By:	4/27/15	16:14
2. Relinquished By:	4/27/15	19:20	2.Received By:	4-27-15	1920
3. Relinquished By:			3.Received By:		

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Chain of Custody and Cooler Receipt Form for 1510030 Page 3 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 2

Submission #: 15-10030

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received
☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 208
Temperature: (A) 2.5 °C / (C) 2.3 °C

Date/Time 4/27/15 1917
Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL		D	D	D	D	D	D	D	D	D
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		E	E	E	E	E	E	E	E	E
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
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 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments: -13 is mislabeled "23-1" in lieu of COC "3-1" but times match.
Sample Numbering Completed By: _____ Date/Time: 4-27-15 1940 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1510030 Page 4 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 2 Of 2

Submission #: 15-10030

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 208 Date/Time 4/27/15 1917

Temperature: (A) 2.5 °C / (C) 2.3 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL	D	D	D							
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	E	E	E							
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABC	ABC	ABC							
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By:_____ Date/Time: 4-27-15 1941 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510030-01	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 06:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-6-4/27/15	**Lab Matrix:**	Water
	Sampled By:	BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-6-4/27/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510030-02	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 06:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-6-4/27/15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-6-4/27/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510030-03	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 06:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-23-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510030-04	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 07:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-23-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510030-05	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 08:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-23-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510030-06	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 08:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-23-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510030-07	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 09:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-23-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510030-08	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 10:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-3-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510030-09	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 10:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-6-2Q15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-6-2Q15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510030-10	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 11:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-3-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510030-11	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 11:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-3-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510030-12	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 12:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-3-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510030-13	**COC Number:**	---	**Receive Date:**	04/27/2015 19:20
	Project Number:	JPL-GW	**Sampling Date:**	04/27/2015 13:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-3-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-01 | **Client Sample Name:** JPL-GW, TB-6-4/27/15, 4/27/2015 6:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-01 | **Client Sample Name:** JPL-GW, TB-6-4/27/15, 4/27/2015 6:00:00AM

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-01 | **Client Sample Name:** JPL-GW, TB-6-4/27/15, 4/27/2015 6:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	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)	90.8	%	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	04/29/15	04/29/15 13:03	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-01 | **Client Sample Name:** JPL-GW, TB-6-4/27/15, 4/27/2015 6:00:00AM

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	04/29/15	04/29/15 13:03	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-02 | **Client Sample Name:** JPL-GW, EB-6-4/27/15, 4/27/2015 6:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-02 | **Client Sample Name:** JPL-GW, EB-6-4/27/15, 4/27/2015 6:20:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-02 | **Client Sample Name:** JPL-GW, EB-6-4/27/15, 4/27/2015 6:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.6	%	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	04/29/15	04/29/15 13:26	MGC	MS-V5	1	BYD2483

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-02 | **Client Sample Name:** JPL-GW, EB-6-4/27/15, 4/27/2015 6:20:00AM, 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	04/29/15	04/29/15 13:26	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-02 | **Client Sample Name:** JPL-GW, EB-6-4/27/15, 4/27/2015 6:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**0.097**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND	**J**	1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	**0.59**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.066		1
Total Recoverable Potassium	**0.13**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND	**J**	1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.21**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND	**J**	3
Nitrate as N	**0.028**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**0.27**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND	**J**	3
pH	**5.34**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/04/15	05/05/15 18:35	JRG	PE-OP2	1	BYE0203
2	SM-2320B	04/29/15	04/29/15 10:21	RML	MET-1	1	BYD2500
3	EPA-300.0	04/27/15	04/28/15 01:57	BMW	IC2	1	BYD2399
4	EPA-150.1	04/29/15	04/29/15 10:21	RML	MET-1	1	BYD2500
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	0.667	BYD2532
6	EPA-353.2	04/28/15	04/28/15 08:11	TDC	KONE-1	1	BYD2470
7	EPA-314.0	05/07/15	05/08/15 06:42	OLH	IC6	1	BYE0773

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-02 | **Client Sample Name:** JPL-GW, EB-6-4/27/15, 4/27/2015 6:20:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	1.6		2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	13		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 02:44	TDC	KONE-1	1	BYD2413
2	EPA-200.8	05/04/15	05/05/15 00:21	EAR	PE-EL2	1	BYE0201
3	EPA-200.7	05/04/15	05/05/15 18:35	JRG	PE-OP2	1	BYE0203

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-03 | **Client Sample Name:** JPL-GW, MW-23-5, 4/27/2015 6:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-03 | **Client Sample Name:** JPL-GW, MW-23-5, 4/27/2015 6:30:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	**0.11**	**ug/L**	**0.50**	**0.098**	**EPA-524.2**	ND	**J**	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.38**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-03 | **Client Sample Name:** JPL-GW, MW-23-5, 4/27/2015 6:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.6	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.1	%	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	04/29/15	04/29/15 07:33	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-03 | **Client Sample Name:** JPL-GW, MW-23-5, 4/27/2015 6:30:00AM, 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	04/29/15	04/29/15 07:33	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-03 | **Client Sample Name:** JPL-GW, MW-23-5, 4/27/2015 6:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**4.1**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**0.27**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**81**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.066		1
Total Recoverable Potassium	**1.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**120**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**39**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**9.1**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.051**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**1.1**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**9.57**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**260**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/04/15	05/05/15 18:37	JRG	PE-OP2	1	BYE0203
2	SM-2320B	04/29/15	04/29/15 10:26	RML	MET-1	1	BYD2500
3	EPA-300.0	04/27/15	04/28/15 03:07	OLH	IC2	1	BYD2399
4	EPA-150.1	04/29/15	04/29/15 10:26	RML	MET-1	1	BYD2500
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2532
6	EPA-353.2	04/28/15	04/28/15 08:26	TDC	KONE-1	1	BYD2470
7	EPA-314.0	05/07/15	05/08/15 06:56	OLH	IC6	1	BYE0773

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-03 | **Client Sample Name:** JPL-GW, MW-23-5, 4/27/2015 6:30:00AM, 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 Arsenic	**3.4**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	1.6		2
Total Recoverable Iron	**54**	**ug/L**	**50**	**6.5**	**EPA-200.7**	13		3
Total Recoverable Lead	**0.30**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 02:44	TDC	KONE-1	1	BYD2413
2	EPA-200.8	05/04/15	05/05/15 00:25	EAR	PE-EL2	1	BYE0201
3	EPA-200.7	05/04/15	05/05/15 18:37	JRG	PE-OP2	1	BYE0203

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-04 | **Client Sample Name:** JPL-GW, MW-23-4, 4/27/2015 7:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-04 | **Client Sample Name:** JPL-GW, MW-23-4, 4/27/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-04 | **Client Sample Name:** JPL-GW, MW-23-4, 4/27/2015 7:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.1	%	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	04/29/15	04/29/15 13:48	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-04 | **Client Sample Name:** JPL-GW, MW-23-4, 4/27/2015 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	04/29/15	04/29/15 13:48	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-04 | **Client Sample Name:** JPL-GW, MW-23-4, 4/27/2015 7:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**31**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**13**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**29**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.066		1
Total Recoverable Potassium	**1.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**180**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**150**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**10**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**3.2**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**9.5**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.18**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**230**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/04/15	05/05/15 18:39	JRG	PE-OP2	1	BYE0203
2	SM-2320B	04/29/15	04/29/15 12:25	RML	MET-1	1	BYD2502
3	EPA-300.0	04/27/15	04/28/15 03:25	OLH	IC2	1	BYD2399
4	EPA-150.1	04/29/15	04/29/15 12:25	RML	MET-1	1	BYD2502
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2532
6	EPA-353.2	04/28/15	04/28/15 08:11	TDC	KONE-1	1	BYD2470
7	EPA-314.0	05/07/15	05/08/15 03:29	BMW	IC6	1	BYE0770

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-04 | **Client Sample Name:** JPL-GW, MW-23-4, 4/27/2015 7:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0015**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**1.6**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.0**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	1.6	**J**	2
Total Recoverable Iron	**59**	**ug/L**	**50**	**6.5**	**EPA-200.7**	13		3
Total Recoverable Lead	**0.14**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 02:44	TDC	KONE-1	1	BYD2413
2	EPA-200.8	05/04/15	05/05/15 00:28	EAR	PE-EL2	1	BYE0201
3	EPA-200.7	05/04/15	05/05/15 18:39	JRG	PE-OP2	1	BYE0203

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-05 | **Client Sample Name:** JPL-GW, MW-23-3, 4/27/2015 8:05:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-05 | **Client Sample Name:** JPL-GW, MW-23-3, 4/27/2015 8:05:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-05 | **Client Sample Name:** JPL-GW, MW-23-3, 4/27/2015 8:05:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/15	04/29/15 14:11	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-05 | **Client Sample Name:** JPL-GW, MW-23-3, 4/27/2015 8:05:00AM, 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	04/29/15	04/29/15 14:11	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-05 | **Client Sample Name:** JPL-GW, MW-23-3, 4/27/2015 8:05:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**53**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**19**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**32**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.018		1
Total Recoverable Potassium	**2.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**170**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**140**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**40**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**10**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**30**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.87**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**350**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.2**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/05/15	05/05/15 19:10	JRG	PE-OP2	1	BYE0332
2	SM-2320B	04/29/15	04/29/15 10:52	RML	MET-1	1	BYD2501
3	EPA-300.0	04/27/15	04/28/15 03:42	OLH	IC2	1	BYD2399
4	EPA-150.1	04/29/15	04/29/15 10:52	RML	MET-1	1	BYD2501
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2532
6	EPA-353.2	04/28/15	04/28/15 08:11	TDC	KONE-1	1	BYD2470
7	EPA-314.0	05/07/15	05/08/15 04:24	OLH	IC6	1	BYE0770

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-05 | **Client Sample Name:** JPL-GW, MW-23-3, 4/27/2015 8:05:00AM, Blaine Tech

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 Arsenic	**0.82**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**3.4**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**51**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 03:08	TDC	KONE-1	1	BYD2413
2	EPA-200.8	05/05/15	05/05/15 17:17	EAR	PE-EL2	1	BYE0342
3	EPA-200.7	05/05/15	05/05/15 19:10	JRG	PE-OP2	1	BYE0332

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-06 | **Client Sample Name:** JPL-GW, MW-23-2, 4/27/2015 8:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.60**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.19**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-06 | **Client Sample Name:** JPL-GW, MW-23-2, 4/27/2015 8:35:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.50**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	**0.18**	**ug/L**	**0.50**	**0.16**	**EPA-524.2**	ND	**J**	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.7**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-06 | **Client Sample Name:** JPL-GW, MW-23-2, 4/27/2015 8:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.5	%	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	04/29/15	04/29/15 14:34	MGC	MS-V5	1	BYD2483

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-06 | **Client Sample Name:** JPL-GW, MW-23-2, 4/27/2015 8:35:00AM, 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	04/29/15	04/29/15 14:34	MGC	MS-V5	1	BYD2483

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-06 | **Client Sample Name:** JPL-GW, MW-23-2, 4/27/2015 8:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**140**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**55**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**40**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.018		1
Total Recoverable Potassium	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**290**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**240**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**110**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**13**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**170**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.78**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**780**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**1.8**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/05/15	05/05/15 19:25	JRG	PE-OP2	1	BYE0332
2	SM-2320B	04/29/15	04/29/15 11:06	RML	MET-1	2	BYD2501
3	EPA-300.0	04/27/15	04/28/15 04:00	OLH	IC2	1	BYD2399
4	EPA-150.1	04/29/15	04/29/15 11:06	RML	MET-1	1	BYD2501
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	5	BYD2532
6	EPA-353.2	04/28/15	04/28/15 08:11	TDC	KONE-1	1	BYD2470
7	EPA-314.0	05/07/15	05/07/15 15:55	BMW	IC6	1	BYE0770

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-06 | **Client Sample Name:** JPL-GW, MW-23-2, 4/27/2015 8:35:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**24**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 02:44	TDC	KONE-1	1	BYD2413
2	EPA-200.8	05/05/15	05/05/15 17:20	EAR	PE-EL2	1	BYE0342
3	EPA-200.7	05/05/15	05/05/15 19:25	JRG	PE-OP2	1	BYE0332

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-07 | **Client Sample Name:** JPL-GW, MW-23-1, 4/27/2015 9:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.76**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.20**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.22**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	**0.24**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-07 | **Client Sample Name:** JPL-GW, MW-23-1, 4/27/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.65**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**4.5**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-07 | **Client Sample Name:** JPL-GW, MW-23-1, 4/27/2015 9:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.2	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.5	%	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	04/29/15	04/29/15 14:57	MGC	MS-V5	1	BYD2483

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-07 | **Client Sample Name:** JPL-GW, MW-23-1, 4/27/2015 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	04/29/15	04/29/15 14:57	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-07 | **Client Sample Name:** JPL-GW, MW-23-1, 4/27/2015 9:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**150**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**57**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**38**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.018		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**270**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**220**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**130**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**14**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**200**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.51**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**820**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.9**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/05/15	05/05/15 19:34	JRG	PE-OP2	1	BYE0332
2	SM-2320B	04/29/15	04/29/15 11:12	RML	MET-1	2	BYD2501
3	EPA-300.0	04/27/15	04/28/15 04:53	OLH	IC2	1	BYD2399
4	EPA-150.1	04/29/15	04/29/15 11:12	RML	MET-1	1	BYD2501
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	5	BYD2532
6	EPA-353.2	04/28/15	04/28/15 07:53	TDC	KONE-1	1	BYD2470
7	EPA-314.0	05/07/15	05/08/15 04:38	OLH	IC6	1	BYE0770

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-07 | **Client Sample Name:** JPL-GW, MW-23-1, 4/27/2015 9:10:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**94**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 02:51	TDC	KONE-1	1	BYD2413
2	EPA-200.8	05/05/15	05/05/15 17:24	EAR	PE-EL2	1	BYE0342
3	EPA-200.7	05/05/15	05/05/15 19:34	JRG	PE-OP2	1	BYE0332

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-08 | **Client Sample Name:** JPL-GW, MW-3-5, 4/27/2015 10:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.18**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-08 | **Client Sample Name:** JPL-GW, MW-3-5, 4/27/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.24**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-08 | **Client Sample Name:** JPL-GW, MW-3-5, 4/27/2015 10:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.1	%	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	04/29/15	04/29/15 15:20	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-08 | **Client Sample Name:** JPL-GW, MW-3-5, 4/27/2015 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	04/29/15	04/29/15 15:20	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-08 | **Client Sample Name:** JPL-GW, MW-3-5, 4/27/2015 10:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**50**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**19**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**48**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.018		1
Total Recoverable Potassium	**2.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**220**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**46**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.2**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**33**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.01**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**360**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	**0.043**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND	**J**	6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/05/15	05/05/15 19:36	JRG	PE-OP2	1	BYE0332
2	SM-2320B	04/29/15	04/29/15 11:19	RML	MET-1	1	BYD2501
3	EPA-300.0	04/27/15	04/28/15 05:10	OLH	IC2	1	BYD2399
4	EPA-150.1	04/29/15	04/29/15 11:19	RML	MET-1	1	BYD2501
5	EPA-160.1	04/29/15	04/29/15 13:30	CAD	MANUAL	2	BYD2532
6	EPA-353.2	04/28/15	04/28/15 07:53	TDC	KONE-1	1	BYD2470
7	EPA-314.0	05/07/15	05/08/15 04:52	OLH	IC6	1	BYE0770

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-08 | **Client Sample Name:** JPL-GW, MW-3-5, 4/27/2015 10:00:00AM, 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 Arsenic	**2.1**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**3.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**1800**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 02:51	TDC	KONE-1	1	BYD2413
2	EPA-200.8	05/05/15	05/05/15 17:27	EAR	PE-EL2	1	BYE0342
3	EPA-200.7	05/05/15	05/05/15 19:36	JRG	PE-OP2	1	BYE0332

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-09 | **Client Sample Name:** JPL-GW, DUP-6-2Q15, 4/27/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.14**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-09 | **Client Sample Name:** JPL-GW, DUP-6-2Q15, 4/27/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.23**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-09 | **Client Sample Name:** JPL-GW, DUP-6-2Q15, 4/27/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.5	%	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	04/29/15	04/29/15 15:43	MGC	MS-V5	1	BYD2483

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-09 | **Client Sample Name:** JPL-GW, DUP-6-2Q15, 4/27/2015 10:10:00AM, 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	04/29/15	04/29/15 15:43	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-09 | **Client Sample Name:** JPL-GW, DUP-6-2Q15, 4/27/2015 10:10:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**52**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**19**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**48**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.018		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**220**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**46**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.2**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**32**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.02**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**350**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	**0.039**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND	**J**	6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/05/15	05/05/15 19:39	JRG	PE-OP2	1	BYE0332
2	SM-2320B	04/29/15	04/29/15 11:26	RML	MET-1	1	BYD2501
3	EPA-300.0	04/27/15	04/28/15 05:28	OLH	IC2	1	BYD2399
4	EPA-150.1	04/29/15	04/29/15 11:26	RML	MET-1	1	BYD2501
5	EPA-160.1	04/30/15	04/30/15 11:00	CAD	MANUAL	2	BYD2635
6	EPA-353.2	04/28/15	04/28/15 07:53	TDC	KONE-1	1	BYD2470
7	EPA-314.0	05/07/15	05/08/15 05:05	OLH	IC6	1	BYE0770

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-09 | **Client Sample Name:** JPL-GW, DUP-6-2Q15, 4/27/2015 10:10:00AM, 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 Arsenic	**13**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**24**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**14000**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 02:51	TDC	KONE-1	1	BYD2413
2	EPA-200.8	05/05/15	05/05/15 17:30	EAR	PE-EL2	1	BYE0342
3	EPA-200.7	05/05/15	05/05/15 19:39	JRG	PE-OP2	1	BYE0332

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/27/2015 11:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.22**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/27/2015 11:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.24**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/27/2015 11:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/15	04/29/15 16:06	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/27/2015 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	04/29/15	04/29/15 16:06	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/27/2015 11:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**56**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**19**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**49**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.018		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**220**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**45**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**2.6**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**35**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.89**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**360**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/05/15	05/05/15 19:41	JRG	PE-OP2	1	BYE0332
2	SM-2320B	04/29/15	04/29/15 11:33	RML	MET-1	1	BYD2501
3	EPA-300.0	04/27/15	04/28/15 05:46	OLH	IC2	1	BYD2399
4	EPA-150.1	04/29/15	04/29/15 11:33	RML	MET-1	1	BYD2501
5	EPA-160.1	04/30/15	04/30/15 11:00	CAD	MANUAL	2	BYD2635
6	EPA-353.2	04/28/15	04/28/15 07:53	TDC	KONE-1	1	BYD2470
7	EPA-314.0	05/07/15	05/08/15 05:19	OLH	IC6	1	BYE0770

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/27/2015 11:00:00AM, 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 Arsenic	**8.1**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**10**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**12000**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 02:51	TDC	KONE-1	1	BYD2413
2	EPA-200.8	05/05/15	05/05/15 17:33	EAR	PE-EL2	1	BYE0342
3	EPA-200.7	05/05/15	05/05/15 19:41	JRG	PE-OP2	1	BYE0332

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/27/2015 11:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.18**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/27/2015 11:35:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.15**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/27/2015 11:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	88.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.1	%	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	04/29/15	04/29/15 16:28	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/27/2015 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	04/29/15	04/29/15 16:28	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/27/2015 11:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**53**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**18**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**46**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.018		1
Total Recoverable Potassium	**2.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**220**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**45**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**2.8**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**34**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.82**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**360**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/05/15	05/05/15 19:44	JRG	PE-OP2	1	BYE0332
2	SM-2320B	04/29/15	04/29/15 11:40	RML	MET-1	1	BYD2501
3	EPA-300.0	04/27/15	04/28/15 06:03	OLH	IC2	1	BYD2399
4	EPA-150.1	04/29/15	04/29/15 11:40	RML	MET-1	1	BYD2501
5	EPA-160.1	04/30/15	04/30/15 11:00	CAD	MANUAL	2	BYD2635
6	EPA-353.2	04/28/15	04/28/15 07:53	TDC	KONE-1	1	BYD2470
7	EPA-314.0	05/07/15	05/08/15 05:33	OLH	IC6	1	BYE0770

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/27/2015 11:35:00AM, 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 Arsenic	**2.4**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**2.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**740**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 02:51	TDC	KONE-1	1	BYD2413
2	EPA-200.8	05/05/15	05/05/15 17:36	EAR	PE-EL2	1	BYE0342
3	EPA-200.7	05/05/15	05/05/15 19:44	JRG	PE-OP2	1	BYE0332

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/27/2015 12:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**0.37**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**2.1**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/27/2015 12:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/27/2015 12:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.0	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/15	04/29/15 16:51	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/27/2015 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	04/29/15	04/29/15 16:51	MGC	MS-V5	1	BYD2483

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Tidewater Inc.
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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/27/2015 12:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**67**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**24**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**23**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.018		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**35**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.85**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**33**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.94**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**340**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**33**	**ug/L**	**8.0**	**2.6**	**EPA-314.0**	ND	**A07**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/05/15	05/05/15 19:46	JRG	PE-OP2	1	BYE0332
2	SM-2320B	04/29/15	04/29/15 11:48	RML	MET-1	1	BYD2501
3	EPA-300.0	04/28/15	04/28/15 06:56	OLH	IC2	1	BYD2400
4	EPA-150.1	04/29/15	04/29/15 11:48	RML	MET-1	1	BYD2501
5	EPA-160.1	04/30/15	04/30/15 11:00	CAD	MANUAL	2	BYD2635
6	EPA-353.2	04/28/15	04/28/15 07:53	TDC	KONE-1	1	BYD2471
7	EPA-314.0	05/07/15	05/07/15 17:46	BMW	IC6	2	BYE0770

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/27/2015 12:10:00PM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.60**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**110**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 02:51	TDC	KONE-1	1	BYD2414
2	EPA-200.8	05/05/15	05/05/15 17:39	EAR	PE-EL2	1	BYE0342
3	EPA-200.7	05/05/15	05/05/15 19:46	JRG	PE-OP2	1	BYE0332

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/27/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/27/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510030-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/27/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.2	%	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	04/29/15	04/29/15 17:14	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510030-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/27/2015 1:20:00PM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/15	04/29/15 17:14	MGC	MS-V5	1	BYD2483

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510030-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/27/2015 1:20:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**87**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**31**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**29**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.018		1
Total Recoverable Potassium	**3.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**320**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**260**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**23**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.30**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**83**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.93**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**420**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/05/15	05/05/15 19:48	JRG	PE-OP2	1	BYE0332
2	SM-2320B	04/29/15	04/29/15 11:55	RML	MET-1	1	BYD2501
3	EPA-300.0	04/28/15	04/28/15 08:42	OLH	IC2	1	BYD2400
4	EPA-150.1	04/29/15	04/29/15 11:55	RML	MET-1	1	BYD2501
5	EPA-160.1	04/30/15	04/30/15 11:00	CAD	MANUAL	2	BYD2635
6	EPA-353.2	04/28/15	04/28/15 07:55	TDC	KONE-1	1	BYD2471
7	EPA-314.0	05/07/15	05/08/15 06:28	OLH	IC6	1	BYE0770

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510030-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/27/2015 1:20:00PM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**780**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 02:57	TDC	KONE-1	1	BYD2414
2	EPA-200.8	05/05/15	05/05/15 17:42	EAR	PE-EL2	1	BYE0342
3	EPA-200.7	05/05/15	05/05/15 19:48	JRG	PE-OP2	1	BYE0332

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2483						
Benzene	BYD2483-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYD2483-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYD2483-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYD2483-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYD2483-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYD2483-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYD2483-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYD2483-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYD2483-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYD2483-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYD2483-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYD2483-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYD2483-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYD2483-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYD2483-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYD2483-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYD2483-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYD2483-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYD2483-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYD2483-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYD2483-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYD2483-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYD2483-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYD2483-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYD2483-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYD2483-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYD2483-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYD2483-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYD2483-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYD2483-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYD2483-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYD2483-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYD2483-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYD2483-BLK1	ND	ug/L	0.50	0.14	

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Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2483						
trans-1,3-Dichloropropene	BYD2483-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYD2483-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYD2483-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYD2483-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYD2483-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYD2483-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BYD2483-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYD2483-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYD2483-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYD2483-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYD2483-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYD2483-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYD2483-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYD2483-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYD2483-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYD2483-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYD2483-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYD2483-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYD2483-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYD2483-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYD2483-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYD2483-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYD2483-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYD2483-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYD2483-BLK1	ND	ug/L	0.50	0.12	
Acetone	BYD2483-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BYD2483-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BYD2483-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BYD2483-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BYD2483-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BYD2483-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BYD2483-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BYD2483-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BYD2483-BLK1	ND	ug/L	4.0	0.97	

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2483						
Ethyl t-butyl ether	BYD2483-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BYD2483-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BYD2483-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BYD2483-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BYD2483-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BYD2483-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BYD2483-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BYD2483-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BYD2483-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BYD2483-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BYD2483-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BYD2483-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYD2483-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYD2483-BLK1**	**97.7**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYD2483-BLK1**	**101**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYD2483-BLK1**	**99.7**	%	**80 - 120 (LCL - UCL)**		

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2483										
Benzene	BYD2483-BS1	LCS	26.280	25.000	ug/L	105		70 - 130		
Bromodichloromethane	BYD2483-BS1	LCS	27.220	25.000	ug/L	109		70 - 130		
Chlorobenzene	BYD2483-BS1	LCS	28.190	25.000	ug/L	113		70 - 130		
Chloroethane	BYD2483-BS1	LCS	25.020	25.000	ug/L	100		70 - 130		
1,4-Dichlorobenzene	BYD2483-BS1	LCS	27.760	25.000	ug/L	111		70 - 130		
1,1-Dichloroethane	BYD2483-BS1	LCS	23.750	25.000	ug/L	95.0		70 - 130		
1,1-Dichloroethene	BYD2483-BS1	LCS	27.000	25.000	ug/L	108		70 - 130		
Toluene	BYD2483-BS1	LCS	26.800	25.000	ug/L	107		70 - 130		
Trichloroethene	BYD2483-BS1	LCS	28.360	25.000	ug/L	113		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYD2483-BS1	LCS	9.4100	10.000	ug/L	94.1		75 - 125		
Toluene-d8 (Surrogate)	BYD2483-BS1	LCS	9.7700	10.000	ug/L	97.7		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYD2483-BS1	LCS	9.5000	10.000	ug/L	95.0		80 - 120		

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2483	Used client sample: Y - Description: MW-23-5, 04/27/2015 06:30										
Benzene	MS	1510030-03	ND	23.800	25.000	ug/L		95.2		70 - 130	
	MSD	1510030-03	ND	23.190	25.000	ug/L	2.6	92.8	20	70 - 130	
Bromodichloromethane	MS	1510030-03	ND	26.200	25.000	ug/L		105		70 - 130	
	MSD	1510030-03	ND	25.630	25.000	ug/L	2.2	103	20	70 - 130	
Chlorobenzene	MS	1510030-03	ND	25.320	25.000	ug/L		101		70 - 130	
	MSD	1510030-03	ND	25.980	25.000	ug/L	2.6	104	20	70 - 130	
Chloroethane	MS	1510030-03	ND	23.520	25.000	ug/L		94.1		70 - 130	
	MSD	1510030-03	ND	22.680	25.000	ug/L	3.6	90.7	20	70 - 130	
1,4-Dichlorobenzene	MS	1510030-03	ND	24.570	25.000	ug/L		98.3		70 - 130	
	MSD	1510030-03	ND	25.670	25.000	ug/L	4.4	103	20	70 - 130	
1,1-Dichloroethane	MS	1510030-03	ND	22.020	25.000	ug/L		88.1		70 - 130	
	MSD	1510030-03	ND	21.570	25.000	ug/L	2.1	86.3	20	70 - 130	
1,1-Dichloroethene	MS	1510030-03	ND	24.750	25.000	ug/L		99.0		70 - 130	
	MSD	1510030-03	ND	23.930	25.000	ug/L	3.4	95.7	20	70 - 130	
Toluene	MS	1510030-03	ND	25.390	25.000	ug/L		102		70 - 130	
	MSD	1510030-03	ND	24.350	25.000	ug/L	4.2	97.4	20	70 - 130	
Trichloroethene	MS	1510030-03	ND	26.110	25.000	ug/L		104		70 - 130	
	MSD	1510030-03	ND	25.640	25.000	ug/L	1.8	103	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1510030-03	ND	9.3700	10.000	ug/L		93.7		75 - 125	
	MSD	1510030-03	ND	9.0100	10.000	ug/L	3.9	90.1		75 - 125	
Toluene-d8 (Surrogate)	MS	1510030-03	ND	9.9000	10.000	ug/L		99.0		80 - 120	
	MSD	1510030-03	ND	9.7700	10.000	ug/L	1.3	97.7		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1510030-03	ND	9.5200	10.000	ug/L		95.2		80 - 120	
	MSD	1510030-03	ND	9.6800	10.000	ug/L	1.7	96.8		80 - 120	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2483						
Chloroacetonitrile	BYD2483-BLK1	0	ug/L			
1-Chlorobutane	BYD2483-BLK1	0	ug/L			
1,1-Dichloropropanone	BYD2483-BLK1	0	ug/L			
Methyl acrylate	BYD2483-BLK1	0	ug/L			
Nitrobenzene	BYD2483-BLK1	0	ug/L			
2-Nitropropane	BYD2483-BLK1	0	ug/L			

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2399						
Chloride	BYD2399-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD2399-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD2399-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD2400						
Chloride	BYD2400-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD2400-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD2400-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD2470						
Nitrite as N	BYD2470-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD2471						
Nitrite as N	BYD2471-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYD2500						
Bicarbonate	BYD2500-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2500-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2500-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2501						
Bicarbonate	BYD2501-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2501-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2501-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2502						
Bicarbonate	BYD2502-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2502-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2502-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2532						
Total Dissolved Solids @ 180 C	BYD2532-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYD2635						
Total Dissolved Solids @ 180 C	BYD2635-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYE0203						
Total Recoverable Calcium	BYE0203-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	BYE0203-BLK1	ND	mg/L	0.050	0.019	

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYE0203						
Total Recoverable Sodium	**BYE0203-BLK1**	**0.065584**	**mg/L**	**0.50**	**0.017**	**J**
Total Recoverable Potassium	BYE0203-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE0332						
Total Recoverable Calcium	BYE0332-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	BYE0332-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	**BYE0332-BLK1**	**0.018170**	**mg/L**	**0.50**	**0.017**	**J**
Total Recoverable Potassium	BYE0332-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE0770						
Perchlorate	BYE0770-BLK1	ND	ug/L	4.0	1.3	
QC Batch ID: BYE0773						
Perchlorate	BYE0773-BLK1	ND	ug/L	4.0	1.3	

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2399										
Chloride	BYD2399-BS1	LCS	51.382	50.000	mg/L	103		90 - 110		
Nitrate as N	BYD2399-BS1	LCS	5.0620	5.0000	mg/L	101		90 - 110		
Sulfate	BYD2399-BS1	LCS	102.60	100.00	mg/L	103		90 - 110		
QC Batch ID: BYD2400										
Chloride	BYD2400-BS1	LCS	51.574	50.000	mg/L	103		90 - 110		
Nitrate as N	BYD2400-BS1	LCS	5.1370	5.0000	mg/L	103		90 - 110		
Sulfate	BYD2400-BS1	LCS	103.15	100.00	mg/L	103		90 - 110		
QC Batch ID: BYD2470										
Nitrite as N	BYD2470-BS1	LCS	0.49855	0.50000	mg/L	99.7		90 - 110		
QC Batch ID: BYD2471										
Nitrite as N	BYD2471-BS1	LCS	0.49912	0.50000	mg/L	99.8		90 - 110		
QC Batch ID: BYD2500										
Total Alkalinity as CaCO3	BYD2500-BS3	LCS	108.47	100.00	mg/L	108		90 - 110		
pH	BYD2500-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD2501										
Total Alkalinity as CaCO3	BYD2501-BS3	LCS	102.08	100.00	mg/L	102		90 - 110		
pH	BYD2501-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD2502										
Total Alkalinity as CaCO3	BYD2502-BS3	LCS	100.56	100.00	mg/L	101		90 - 110		
pH	BYD2502-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD2532										
Total Dissolved Solids @ 180 C	BYD2532-BS1	LCS	600.00	586.00	mg/L	102		90 - 110		
QC Batch ID: BYD2635										
Total Dissolved Solids @ 180 C	BYD2635-BS1	LCS	575.00	586.00	mg/L	98.1		90 - 110		
QC Batch ID: BYE0203										
Total Recoverable Calcium	BYE0203-BS1	LCS	10.573	10.000	mg/L	106		85 - 115		
Total Recoverable Magnesium	BYE0203-BS1	LCS	11.374	10.000	mg/L	114		85 - 115		
Total Recoverable Sodium	BYE0203-BS1	LCS	10.634	10.000	mg/L	106		85 - 115		
Total Recoverable Potassium	BYE0203-BS1	LCS	10.252	10.000	mg/L	103		85 - 115		
QC Batch ID: BYE0332										
Total Recoverable Calcium	BYE0332-BS1	LCS	10.553	10.000	mg/L	106		85 - 115		
Total Recoverable Magnesium	BYE0332-BS1	LCS	11.352	10.000	mg/L	114		85 - 115		

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Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0332										
Total Recoverable Sodium	BYE0332-BS1	LCS	10.491	10.000	mg/L	105		85 - 115		
Total Recoverable Potassium	BYE0332-BS1	LCS	10.342	10.000	mg/L	103		85 - 115		
QC Batch ID: BYE0770										
Perchlorate	BYE0770-BS1	LCS	9.9680	10.000	ug/L	99.7		85 - 115		
QC Batch ID: BYE0773										
Perchlorate	BYE0773-BS1	LCS	10.596	10.000	ug/L	106		85 - 115		

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2399	Used client sample: Y - Description: EB-6-4/27/15, 04/27/2015 06:20										
Chloride	DUP	1510030-02	0.20900	0.19300		mg/L	8.0		10		J
	MS	1510030-02	0.20900	51.697	50.505	mg/L		102		80 - 120	
	MSD	1510030-02	0.20900	51.765	50.505	mg/L	0.1	102	10	80 - 120	
Nitrate as N	DUP	1510030-02	0.028000	0.028000		mg/L	0		10		J
	MS	1510030-02	0.028000	5.1374	5.0505	mg/L		101		80 - 120	
	MSD	1510030-02	0.028000	5.1434	5.0505	mg/L	0.1	101	10	80 - 120	
Sulfate	DUP	1510030-02	0.26600	0.25600		mg/L	3.8		10		J
	MS	1510030-02	0.26600	103.04	101.01	mg/L		102		80 - 120	
	MSD	1510030-02	0.26600	103.17	101.01	mg/L	0.1	102	10	80 - 120	
QC Batch ID: BYD2400	Used client sample: Y - Description: MW-3-2, 04/27/2015 12:10										
Chloride	DUP	1510030-12	35.335	35.467		mg/L	0.4		10		
	MS	1510030-12	35.335	90.576	50.505	mg/L		109		80 - 120	
	MSD	1510030-12	35.335	90.765	50.505	mg/L	0.2	110	10	80 - 120	
Nitrate as N	DUP	1510030-12	0.84800	0.85200		mg/L	0.5		10		
	MS	1510030-12	0.84800	6.1162	5.0505	mg/L		104		80 - 120	
	MSD	1510030-12	0.84800	6.1313	5.0505	mg/L	0.2	105	10	80 - 120	
Sulfate	DUP	1510030-12	33.299	33.242		mg/L	0.2		10		
	MS	1510030-12	33.299	142.73	101.01	mg/L		108		80 - 120	
	MSD	1510030-12	33.299	142.98	101.01	mg/L	0.2	109	10	80 - 120	
QC Batch ID: BYD2470	Used client sample: Y - Description: MW-23-5, 04/27/2015 06:30										
Nitrite as N	DUP	1510030-03	ND	ND		mg/L			10		
	MS	1510030-03	ND	0.56000	0.52632	mg/L		106		90 - 110	
	MSD	1510030-03	ND	0.56035	0.52632	mg/L	0.1	106	10	90 - 110	
QC Batch ID: BYD2471	Used client sample: Y - Description: MW-3-2, 04/27/2015 12:10										
Nitrite as N	DUP	1510030-12	ND	ND		mg/L			10		
	MS	1510030-12	ND	0.52700	0.52632	mg/L		100		90 - 110	
	MSD	1510030-12	ND	0.53397	0.52632	mg/L	1.3	101	10	90 - 110	
QC Batch ID: BYD2500	Used client sample: Y - Description: MW-20-4, 04/22/2015 07:40										
Bicarbonate	DUP	1509718-04	136.52	136.89		mg/L	0.3		10		
Carbonate	DUP	1509718-04	11.308	10.582		mg/L	6.6		10		
Total Alkalinity as CaCO3	DUP	1509718-04	130.83	129.92		mg/L	0.7		10		
pH	DUP	1509718-04	8.7800	8.7900		pH Units	0.1		20		
QC Batch ID: BYD2501	Used client sample: Y - Description: MW-23-3, 04/27/2015 08:05										
Bicarbonate	DUP	1510030-05	174.55	170.28		mg/L	2.5		10		
Carbonate	DUP	1510030-05	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1510030-05	143.16	139.66		mg/L	2.5		10		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2501	Used client sample: Y - Description: MW-23-3, 04/27/2015 08:05										
pH	DUP	1510030-05	7.8700	7.8700		pH Units	0		20		
QC Batch ID: BYD2502	Used client sample: Y - Description: MW-23-4, 04/27/2015 07:30										
Bicarbonate	DUP	1510030-04	178.62	177.89		mg/L	0.4		10		
Carbonate	DUP	1510030-04	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1510030-04	146.50	145.90		mg/L	0.4		10		
pH	DUP	1510030-04	8.1800	8.2000		pH Units	0.2		20		
QC Batch ID: BYD2532	Used client sample: Y - Description: MW-23-1, 04/27/2015 09:10										
Total Dissolved Solids @ 180 C	DUP	1510030-07	815.00	815.00		mg/L	0		10		
QC Batch ID: BYD2635	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1510165-12	463.33	456.66		mg/L	1.4		10		
QC Batch ID: BYE0203	Used client sample: N										
Total Recoverable Calcium	DUP	1509961-01	3.7335	3.8819		mg/L	3.9		20		
	MS	1509961-01	3.7335	14.041	10.000	mg/L		103		75 - 125	
	MSD	1509961-01	3.7335	13.881	10.000	mg/L	1.1	101	20	75 - 125	
Total Recoverable Magnesium	DUP	1509961-01	0.81241	0.84763		mg/L	4.2		20		
	MS	1509961-01	0.81241	12.240	10.000	mg/L		114		75 - 125	
	MSD	1509961-01	0.81241	11.806	10.000	mg/L	3.6	110	20	75 - 125	
Total Recoverable Sodium	DUP	1509961-01	9.6256	9.7803		mg/L	1.6		20		
	MS	1509961-01	9.6256	19.520	10.000	mg/L		98.9		75 - 125	
	MSD	1509961-01	9.6256	19.206	10.000	mg/L	1.6	95.8	20	75 - 125	
Total Recoverable Potassium	DUP	1509961-01	0.70199	0.70628		mg/L	0.6		20		J
	MS	1509961-01	0.70199	10.885	10.000	mg/L		102		75 - 125	
	MSD	1509961-01	0.70199	10.749	10.000	mg/L	1.3	100	20	75 - 125	
QC Batch ID: BYE0332	Used client sample: Y - Description: MW-23-3, 04/27/2015 08:05										
Total Recoverable Calcium	DUP	1510030-05	52.970	54.094		mg/L	2.1		20		
	MS	1510030-05	52.970	61.392	10.000	mg/L		84.2		75 - 125	
	MSD	1510030-05	52.970	61.198	10.000	mg/L	0.3	82.3	20	75 - 125	
Total Recoverable Magnesium	DUP	1510030-05	19.296	19.546		mg/L	1.3		20		
	MS	1510030-05	19.296	29.624	10.000	mg/L		103		75 - 125	
	MSD	1510030-05	19.296	29.423	10.000	mg/L	0.7	101	20	75 - 125	
Total Recoverable Sodium	DUP	1510030-05	32.334	32.871		mg/L	1.6		20		
	MS	1510030-05	32.334	41.450	10.000	mg/L		91.2		75 - 125	
	MSD	1510030-05	32.334	40.981	10.000	mg/L	1.1	86.5	20	75 - 125	
Total Recoverable Potassium	DUP	1510030-05	1.9879	2.0346		mg/L	2.3		20		
	MS	1510030-05	1.9879	12.315	10.000	mg/L		103		75 - 125	
	MSD	1510030-05	1.9879	12.209	10.000	mg/L	0.9	102	20	75 - 125	

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0770	Used client sample: Y - Description: MW-23-4, 04/27/2015 07:30										
Perchlorate	DUP	510030-04RE´	ND	ND		ug/L			15		
	MS	510030-04RE´	ND	10.785	10.101	ug/L		107		80 - 120	
	MSD	510030-04RE´	ND	10.412	10.101	ug/L	3.5	103	15	80 - 120	
QC Batch ID: BYE0773	Used client sample: N										
Perchlorate	DUP	**1510785-01**	**1.5928**	**1.8623**		**ug/L**	**15.6**		**15**		**J,A02**
	MS	**1510785-01**	**1.5928**	**12.392**	**10.101**	**ug/L**		**107**		**80 - 120**	
	MSD	**1510785-01**	**1.5928**	**12.012**	**10.101**	**ug/L**	**3.1**	**103**	**15**	**80 - 120**	

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2413						
Hexavalent Chromium	BYD2413-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYD2414						
Hexavalent Chromium	BYD2414-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYE0201						
Total Recoverable Arsenic	BYE0201-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	**BYE0201-BLK1**	**1.5600**	**ug/L**	**3.0**	**0.50**	**J**
Total Recoverable Lead	BYE0201-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYE0203						
Total Recoverable Iron	**BYE0203-BLK1**	**13.153**	**ug/L**	**50**	**6.5**	**J**
QC Batch ID: BYE0332						
Total Recoverable Iron	BYE0332-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BYE0342						
Total Recoverable Arsenic	BYE0342-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BYE0342-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BYE0342-BLK1	ND	ug/L	1.0	0.10	

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Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2413										
Hexavalent Chromium	BYD2413-BS1	LCS	0.048699	0.050000	mg/L	97.4		85 - 115		
QC Batch ID: BYD2414										
Hexavalent Chromium	BYD2414-BS1	LCS	0.049816	0.050000	mg/L	99.6		85 - 115		
QC Batch ID: BYE0201										
Total Recoverable Arsenic	BYE0201-BS1	LCS	106.11	100.00	ug/L	106		85 - 115		
Total Recoverable Chromium	BYE0201-BS1	LCS	44.445	40.000	ug/L	111		85 - 115		
Total Recoverable Lead	BYE0201-BS1	LCS	101.36	100.00	ug/L	101		85 - 115		
QC Batch ID: BYE0203										
Total Recoverable Iron	BYE0203-BS1	LCS	1148.0	1000.0	ug/L	115		85 - 115		
QC Batch ID: BYE0332										
Total Recoverable Iron	BYE0332-BS1	LCS	1118.5	1000.0	ug/L	112		85 - 115		
QC Batch ID: BYE0342										
Total Recoverable Arsenic	BYE0342-BS1	LCS	105.29	100.00	ug/L	105		85 - 115		
Total Recoverable Chromium	BYE0342-BS1	LCS	43.847	40.000	ug/L	110		85 - 115		
Total Recoverable Lead	BYE0342-BS1	LCS	103.48	100.00	ug/L	103		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/15/2015 16:02
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2413	Used client sample: Y - Description: EB-6-4/27/15, 04/27/2015 06:20										
Hexavalent Chromium	DUP	1510030-02	ND	ND		mg/L			10		
	MS	1510030-02	ND	0.051637	0.052632	mg/L		98.1		85 - 115	
	MSD	1510030-02	ND	0.050283	0.052632	mg/L	2.7	95.5	10	85 - 115	
QC Batch ID: BYD2414	Used client sample: Y - Description: MW-3-2, 04/27/2015 12:10										
Hexavalent Chromium	DUP	1510030-12	ND	ND		mg/L			10		
	MS	1510030-12	ND	0.054282	0.052632	mg/L		103		85 - 115	
	MSD	1510030-12	ND	0.054441	0.052632	mg/L	0.3	103	10	85 - 115	
QC Batch ID: BYE0201	Used client sample: Y - Description: MW-19-3, 04/24/2015 11:35										
Total Recoverable Arsenic	DUP	1509937-12	ND	ND		ug/L			20		
	MS	1509937-12	ND	107.85	100.00	ug/L		108		70 - 130	
	MSD	1509937-12	ND	110.05	100.00	ug/L	2.0	110	20	70 - 130	
Total Recoverable Chromium	DUP	1509937-12	3.0050	2.9720		ug/L	1.1		20		J
	MS	1509937-12	3.0050	41.118	40.000	ug/L		95.3		70 - 130	
	MSD	1509937-12	3.0050	41.117	40.000	ug/L	0.0	95.3	20	70 - 130	
Total Recoverable Lead	DUP	1509937-12	ND	ND		ug/L			20		
	MS	1509937-12	ND	91.237	100.00	ug/L		91.2		70 - 130	
	MSD	1509937-12	ND	94.712	100.00	ug/L	3.7	94.7	20	70 - 130	
QC Batch ID: BYE0203	Used client sample: N										
Total Recoverable Iron	DUP	1509961-01	ND	82.877		ug/L			20		
	MS	1509961-01	ND	1093.2	1000.0	ug/L		109		75 - 125	
	MSD	1509961-01	ND	1083.3	1000.0	ug/L	0.9	108	20	75 - 125	
QC Batch ID: BYE0332	Used client sample: Y - Description: MW-23-3, 04/27/2015 08:05										
Total Recoverable Iron	DUP	**1510030-05**	**51.295**	**77.984**		**ug/L**	**41.3**		**20**		**A02**
	MS	**1510030-05**	**51.295**	**1141.2**	**1000.0**	**ug/L**		**109**		**75 - 125**	
	MSD	**1510030-05**	**51.295**	**1179.1**	**1000.0**	**ug/L**	**3.3**	**113**	**20**	**75 - 125**	
QC Batch ID: BYE0342	Used client sample: N										
Total Recoverable Arsenic	DUP	1510189-01	112.85	118.32		ug/L	4.7		20		
	MS	1510189-01	112.85	215.17	100.00	ug/L		102		70 - 130	
	MSD	1510189-01	112.85	222.31	100.00	ug/L	3.3	109	20	70 - 130	
Total Recoverable Chromium	DUP	1510189-01	ND	ND		ug/L			20		
	MS	1510189-01	ND	39.281	40.000	ug/L		98.2		70 - 130	
	MSD	1510189-01	ND	39.824	40.000	ug/L	1.4	99.6	20	70 - 130	
Total Recoverable Lead	DUP	1510189-01	0.61600	0.63100		ug/L	2.4		20		J
	MS	1510189-01	0.61600	95.849	100.00	ug/L		95.2		70 - 130	
	MSD	1510189-01	0.61600	97.503	100.00	ug/L	1.7	96.9	20	70 - 130	

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Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/15/2015 16:02 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A02	The difference between duplicate readings is less than the quantitation limit.
A07	Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

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Date of Report: 05/19/2015

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 2nd Qtr. 2015
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1510147
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 4/28/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.

Chain of Custody Form

*Required Fields

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Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:*(614) 792 - 2897 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-10147

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)	Notes
-1	TB-7-4/28/15	4-28-15	0610	AQ	X									
-2	EB-7-4/28/15		0620		X	X	X	X	X	X				
-3	MW-18-5		0650		X	X	X	X	X	X				
-4	MW-18-4		0730		X	X	X	X	X	X				
-5	MW-18-3		0900		X	X	X	X	X	X				
-6	MW-18-2		0935		X	X	X	X	X	X				
-7	MW-21-5		1040		X	X	X	X	X	X				
-8	MW-21-4		1120		X	X	X	X	X	X				
-9	MW-21-3		1155		X	X	X	X	X	X				
-10	MW-21-2		1230		X	X	X	X	X	X				
-11	DUP-7-2015	↓	1240	↓	X	X	X	X	X	X				

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT

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

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

Lab TAT Approval: _____ *Additional Charges May Apply

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

Relinquished By:	Date	Time	Received By:	Date	Time
1. [signature]	4-28-15	1500	1. [signature]	4/28/15	15:00
2. [signature]	4/28/15	1610	2. [signature]	4/28/15	1610
3. [signature]	4/28/15	1900	3. [signature]	4-28-15	1900

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 and Cooler Receipt Form for 1510147 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 1

Submission #: 15-10147

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4-28-15 1901
Temperature: (A) 0.7 °C / (C) 0.8 °C Analyst Init

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10/11
QT GENERAL MINERAL/ GENERAL		D	D	D	D	D	D	D	D	D
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		E	E	E	E	E	E	E	E	E
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
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 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: Date/Time: 4-28-15 1925 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510147-01	**COC Number:**	---	**Receive Date:**	04/28/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/28/2015 06:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-7-4/28/15	**Lab Matrix:**	Water
	Sampled By:	BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-7-4/28/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510147-02	**COC Number:**	---	**Receive Date:**	04/28/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/28/2015 06:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-7-4/28/15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-7-4/28/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510147-03	**COC Number:**	---	**Receive Date:**	04/28/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/28/2015 06:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-18-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510147-04	**COC Number:**	---	**Receive Date:**	04/28/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/28/2015 07:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-18-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-18-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510147-05	**COC Number:**	---	**Receive Date:**	04/28/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/28/2015 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-18-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-18-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510147-06	**COC Number:**	---	**Receive Date:**	04/28/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/28/2015 09:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-18-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510147-07	**COC Number:**	---	**Receive Date:**	04/28/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/28/2015 10:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-21-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-21-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510147-08	**COC Number:**	---	**Receive Date:**	04/28/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/28/2015 11:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-21-4	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-21-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510147-09	**COC Number:**	---	**Receive Date:**	04/28/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/28/2015 11:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-21-3	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			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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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510147-10	**COC Number:**	---	**Receive Date:**	04/28/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/28/2015 12:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-21-2	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-21-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510147-11	**COC Number:**	---	**Receive Date:**	04/28/2015 19:00
	Project Number:	JPL-GW	**Sampling Date:**	04/28/2015 12:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-7-2Q15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-7-2Q15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-01 | **Client Sample Name:** JPL-GW, TB-7-4/28/15, 4/28/2015 6:10:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-01 | **Client Sample Name:** JPL-GW, TB-7-4/28/15, 4/28/2015 6:10:00AM

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-01 | **Client Sample Name:** JPL-GW, TB-7-4/28/15, 4/28/2015 6:10:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	92.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/15	04/30/15 09:55	MGC	MS-V5	1	BYD2588

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510147-01 | **Client Sample Name:** JPL-GW, TB-7-4/28/15, 4/28/2015 6:10:00AM

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	04/30/15	04/30/15 09:55	MGC	MS-V5	1	BYD2588

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-02 | **Client Sample Name:** JPL-GW, EB-7-4/28/15, 4/28/2015 6:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-02 | **Client Sample Name:** JPL-GW, EB-7-4/28/15, 4/28/2015 6:20:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-02 | **Client Sample Name:** JPL-GW, EB-7-4/28/15, 4/28/2015 6:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.6	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/15	04/30/15 10:17	MGC	MS-V5	1	BYD2588

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510147-02 | **Client Sample Name:** JPL-GW, EB-7-4/28/15, 4/28/2015 6:20:00AM, 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	04/30/15	04/30/15 10:17	MGC	MS-V5	1	BYD2588

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510147-02 | **Client Sample Name:** JPL-GW, EB-7-4/28/15, 4/28/2015 6:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	**0.16**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND	**J**	1
Total Recoverable Potassium	**0.11**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND	**J**	1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.18**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND	**J**	3
Nitrate as N	**0.026**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND	**J**	3
Sulfate	**0.28**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND	**J**	3
pH	**5.13**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	2.5	2.5	EPA-160.1	ND	S05	5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/12/15	05/12/15 17:47	JRG	PE-OP2	1	BYE1010
2	SM-2320B	04/29/15	04/29/15 15:55	RML	MET-1	1	BYD2504
3	EPA-300.0	04/29/15	04/29/15 09:32	OLH	IC5	1	BYD2547
4	EPA-150.1	04/29/15	04/29/15 15:55	RML	MET-1	1	BYD2504
5	EPA-160.1	05/08/15	05/08/15 09:00	CAD	MANUAL	0.250	BYE0762
6	EPA-353.2	04/28/15	04/28/15 23:12	BMW	KONE-1	1	BYD2670
7	EPA-314.0	05/12/15	05/12/15 14:27	BMW	IC6	1	BYE1104

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510147-02 | **Client Sample Name:** JPL-GW, EB-7-4/28/15, 4/28/2015 6:20:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.76**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.92	**J**	2
Total Recoverable Iron	**16**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 22:36	BMW	KONE-1	1	BYD2671
2	EPA-200.8	05/05/15	05/05/15 22:39	EAR	PE-EL2	1	BYE0344
3	EPA-200.7	05/12/15	05/12/15 17:47	JRG	PE-OP2	1	BYE1010

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/28/2015 6:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/28/2015 6:50:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.11**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/28/2015 6:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.7	%	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	04/30/15	04/30/15 07:38	MGC	MS-V5	1	BYD2588

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510147-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/28/2015 6:50:00AM, 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	04/30/15	04/30/15 07:38	MGC	MS-V5	1	BYD2588

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510147-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/28/2015 6:50:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**12**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**4.7**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**53**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**160**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**6.2**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**140**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**9.9**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**5.4**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.55**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**220**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/12/15	05/12/15 17:56	JRG	PE-OP2	1	BYE1010
2	SM-2320B	04/29/15	04/29/15 16:00	RML	MET-1	1	BYD2504
3	EPA-300.0	04/29/15	04/29/15 10:41	OLH	IC5	1	BYD2547
4	EPA-150.1	04/29/15	04/29/15 16:00	RML	MET-1	1	BYD2504
5	EPA-160.1	04/30/15	04/30/15 13:00	CAD	MANUAL	2	BYD2637
6	EPA-353.2	04/28/15	04/28/15 23:12	BMW	KONE-1	1	BYD2670
7	EPA-314.0	05/12/15	05/12/15 15:50	BMW	IC6	1	BYE1104

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510147-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/28/2015 6:50:00AM, 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 Arsenic	**0.81**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	0.92		2
Total Recoverable Iron	**150**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 22:36	BMW	KONE-1	1	BYD2671
2	EPA-200.8	05/05/15	05/05/15 23:11	EAR	PE-EL2	1	BYE0344
3	EPA-200.7	05/12/15	05/12/15 17:56	JRG	PE-OP2	1	BYE1010

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/28/2015 7:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**1.9**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.95**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/28/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.4**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/28/2015 7:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.5	%	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	04/30/15	04/30/15 10:40	MGC	MS-V5	1	BYD2588

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510147-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/28/2015 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	04/30/15	04/30/15 10:40	MGC	MS-V5	1	BYD2588

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Tidewater Inc.
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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510147-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/28/2015 7:30:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**35**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**11**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**32**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.4**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**9.3**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.83**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**22**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.30**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**250**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	**0.013**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND	**J**	6
Perchlorate	**13**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/12/15	05/12/15 17:31	JRG	PE-OP2	1	BYE1010
2	SM-2320B	04/29/15	04/29/15 16:07	RML	MET-1	1	BYD2504
3	EPA-300.0	04/29/15	04/29/15 10:59	OLH	IC5	1	BYD2547
4	EPA-150.1	04/29/15	04/29/15 16:07	RML	MET-1	1	BYD2504
5	EPA-160.1	04/30/15	04/30/15 13:00	CAD	MANUAL	2	BYD2637
6	EPA-353.2	04/28/15	04/28/15 23:12	BMW	KONE-1	1	BYD2670
7	EPA-314.0	05/12/15	05/12/15 16:04	BMW	IC6	1	BYE1104

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510147-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/28/2015 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 Arsenic	**0.97**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.92	**J**	2
Total Recoverable Iron	**73**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 22:36	BMW	KONE-1	1	BYD2671
2	EPA-200.8	05/05/15	05/05/15 23:14	EAR	PE-EL2	1	BYE0344
3	EPA-200.7	05/12/15	05/12/15 17:31	JRG	PE-OP2	1	BYE1010

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/28/2015 9:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**4.4**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.99**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/28/2015 9:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.14**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.44**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/28/2015 9:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.7	%	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	04/30/15	04/30/15 11:03	MGC	MS-V5	1	BYD2588

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510147-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/28/2015 9:00:00AM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/15	04/30/15 11:03	MGC	MS-V5	1	BYD2588

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510147-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/28/2015 9:00:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**59**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**18**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**22**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**20**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.7**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**38**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.09**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**340**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**20**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/12/15	05/12/15 17:59	JRG	PE-OP2	1	BYE1010
2	SM-2320B	04/29/15	04/29/15 16:13	RML	MET-1	1	BYD2504
3	EPA-300.0	04/29/15	04/29/15 11:16	OLH	IC5	1	BYD2547
4	EPA-150.1	04/29/15	04/29/15 16:13	RML	MET-1	1	BYD2504
5	EPA-160.1	04/30/15	04/30/15 13:00	CAD	MANUAL	2	BYD2637
6	EPA-353.2	04/28/15	04/28/15 23:12	BMW	KONE-1	1	BYD2670
7	EPA-314.0	05/12/15	05/12/15 16:18	BMW	IC6	1	BYE1104

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510147-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/28/2015 9:00:00AM, Blaine Tech

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 Arsenic	**1.3**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.4**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.92	**J**	2
Total Recoverable Iron	**77**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 22:36	BMW	KONE-1	1	BYD2671
2	EPA-200.8	05/05/15	05/05/15 23:17	EAR	PE-EL2	1	BYE0344
3	EPA-200.7	05/12/15	05/12/15 17:59	JRG	PE-OP2	1	BYE1010

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/28/2015 9:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/28/2015 9:35:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/28/2015 9:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.6	%	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	04/30/15	04/30/15 11:26	MGC	MS-V5	1	BYD2588

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510147-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/28/2015 9:35:00AM, 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	04/30/15	04/30/15 11:26	MGC	MS-V5	1	BYD2588

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510147-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/28/2015 9:35:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**60**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**21**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**22**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**12**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.85**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**34**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.06**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**320**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/12/15	05/12/15 18:01	JRG	PE-OP2	1	BYE1010
2	SM-2320B	04/29/15	04/29/15 16:20	RML	MET-1	1	BYD2504
3	EPA-300.0	04/29/15	04/29/15 11:33	OLH	IC5	1	BYD2547
4	EPA-150.1	04/29/15	04/29/15 16:20	RML	MET-1	1	BYD2504
5	EPA-160.1	04/30/15	04/30/15 13:00	CAD	MANUAL	2	BYD2637
6	EPA-353.2	04/28/15	04/28/15 23:12	BMW	KONE-1	1	BYD2670
7	EPA-314.0	05/12/15	05/12/15 16:31	BMW	IC6	1	BYE1104

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510147-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/28/2015 9:35:00AM, 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 Arsenic	**1.4**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.68**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.92	**J**	2
Total Recoverable Iron	**330**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 22:36	BMW	KONE-1	1	BYD2671
2	EPA-200.8	05/05/15	05/05/15 23:21	EAR	PE-EL2	1	BYE0344
3	EPA-200.7	05/12/15	05/12/15 18:01	JRG	PE-OP2	1	BYE1010

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-07 | **Client Sample Name:** JPL-GW, MW-21-5, 4/28/2015 10:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**7.0**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-07 | **Client Sample Name:** JPL-GW, MW-21-5, 4/28/2015 10:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.99**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-07 | **Client Sample Name:** JPL-GW, MW-21-5, 4/28/2015 10:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.8	%	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	04/30/15	04/30/15 11:48	MGC	MS-V5	1	BYD2588

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510147-07 | **Client Sample Name:** JPL-GW, MW-21-5, 4/28/2015 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	04/30/15	04/30/15 11:48	MGC	MS-V5	1	BYD2588

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510147-07 | **Client Sample Name:** JPL-GW, MW-21-5, 4/28/2015 10:40:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**92**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**30**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**37**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**83**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**5.9**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**130**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**8.09**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**540**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**1.7**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/12/15	05/12/15 18:04	JRG	PE-OP2	1	BYE1010
2	SM-2320B	04/29/15	04/29/15 16:27	RML	MET-1	1	BYD2504
3	EPA-300.0	04/29/15	04/29/15 12:26	OLH	IC5	1	BYD2547
4	EPA-150.1	04/29/15	04/29/15 16:27	RML	MET-1	1	BYD2504
5	EPA-160.1	04/30/15	04/30/15 13:00	CAD	MANUAL	3.333	BYD2637
6	EPA-353.2	04/28/15	04/28/15 23:16	BMW	KONE-1	1	BYD2670
7	EPA-314.0	05/12/15	05/12/15 16:45	BMW	IC6	1	BYE1104

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510147-07 | **Client Sample Name:** JPL-GW, MW-21-5, 4/28/2015 10:40:00AM, Blaine Tech

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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.6**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.92	**J**	2
Total Recoverable Iron	**57**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 22:42	BMW	KONE-1	1	BYD2671
2	EPA-200.8	05/05/15	05/05/15 23:24	EAR	PE-EL2	1	BYE0344
3	EPA-200.7	05/12/15	05/12/15 18:04	JRG	PE-OP2	1	BYE1010

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-08 | **Client Sample Name:** JPL-GW, MW-21-4, 4/28/2015 11:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**7.7**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-08 | **Client Sample Name:** JPL-GW, MW-21-4, 4/28/2015 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.2**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.14**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-08 | **Client Sample Name:** JPL-GW, MW-21-4, 4/28/2015 11:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.9	%	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	04/30/15	04/30/15 12:11	MGC	MS-V5	1	BYD2588

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510147-08 | **Client Sample Name:** JPL-GW, MW-21-4, 4/28/2015 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	04/30/15	04/30/15 12:11	MGC	MS-V5	1	BYD2588

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510147-08 | **Client Sample Name:** JPL-GW, MW-21-4, 4/28/2015 11:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**94**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**31**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**32**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**150**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**79**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**5.8**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**130**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.89**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**530**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.5**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/12/15	05/12/15 18:07	JRG	PE-OP2	1	BYE1010
2	SM-2320B	04/29/15	04/29/15 16:34	RML	MET-1	1	BYD2504
3	EPA-300.0	04/29/15	04/29/15 12:43	OLH	IC5	1	BYD2547
4	EPA-150.1	04/29/15	04/29/15 16:34	RML	MET-1	1	BYD2504
5	EPA-160.1	04/30/15	04/30/15 13:00	CAD	MANUAL	3.333	BYD2637
6	EPA-353.2	04/28/15	04/28/15 23:16	BMW	KONE-1	1	BYD2670
7	EPA-314.0	05/12/15	05/12/15 16:59	BMW	IC6	1	BYE1104

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510147-08 | **Client Sample Name:** JPL-GW, MW-21-4, 4/28/2015 11:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0010**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.5**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.92	**J**	2
Total Recoverable Iron	**200**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 22:42	BMW	KONE-1	1	BYD2671
2	EPA-200.8	05/05/15	05/05/15 23:27	EAR	PE-EL2	1	BYE0344
3	EPA-200.7	05/12/15	05/12/15 18:07	JRG	PE-OP2	1	BYE1010

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-09 | **Client Sample Name:** JPL-GW, MW-21-3, 4/28/2015 11:55:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**1.1**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.15**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.36**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-09 | **Client Sample Name:** JPL-GW, MW-21-3, 4/28/2015 11:55:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**3.0**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.2**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-09 | **Client Sample Name:** JPL-GW, MW-21-3, 4/28/2015 11:55:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.2	%	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	04/30/15	04/30/15 12:34	MGC	MS-V5	1	BYD2588

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510147-09 | **Client Sample Name:** JPL-GW, MW-21-3, 4/28/2015 11:55:00AM, 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	04/30/15	04/30/15 12:34	MGC	MS-V5	1	BYD2588

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510147-09 | **Client Sample Name:** JPL-GW, MW-21-3, 4/28/2015 11:55:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**140**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**46**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**54**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**350**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**290**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**120**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND	**A07**	3
Nitrate as N	**11**	**mg/L**	**0.20**	**0.036**	**EPA-300.0**	ND	**A07**	3
Sulfate	**150**	**mg/L**	**2.0**	**0.20**	**EPA-300.0**	ND	**A07**	3
pH	**7.68**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**770**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.8**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/12/15	05/12/15 18:09	JRG	PE-OP2	1	BYE1010
2	SM-2320B	04/29/15	04/29/15 16:57	RML	MET-1	2	BYD2562
3	EPA-300.0	04/29/15	04/29/15 13:00	OLH	IC5	2	BYD2547
4	EPA-150.1	04/29/15	04/29/15 16:57	RML	MET-1	1	BYD2562
5	EPA-160.1	04/30/15	04/30/15 13:00	CAD	MANUAL	5	BYD2637
6	EPA-353.2	04/28/15	04/28/15 23:16	BMW	KONE-1	1	BYD2670
7	EPA-314.0	05/12/15	05/12/15 17:13	BMW	IC6	1	BYE1104

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510147-09 | **Client Sample Name:** JPL-GW, MW-21-3, 4/28/2015 11:55:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.81**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.92	**J**	2
Total Recoverable Iron	**160**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 22:42	BMW	KONE-1	1	BYD2671
2	EPA-200.8	05/05/15	05/05/15 23:30	EAR	PE-EL2	1	BYE0344
3	EPA-200.7	05/12/15	05/12/15 18:09	JRG	PE-OP2	1	BYE1010

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-10 | **Client Sample Name:** JPL-GW, MW-21-2, 4/28/2015 12:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.33**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-10 | **Client Sample Name:** JPL-GW, MW-21-2, 4/28/2015 12:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.26**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-10 | **Client Sample Name:** JPL-GW, MW-21-2, 4/28/2015 12:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.1	%	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	04/30/15	04/30/15 12:57	MGC	MS-V5	1	BYD2588

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510147-10 | **Client Sample Name:** JPL-GW, MW-21-2, 4/28/2015 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	04/30/15	04/30/15 12:57	MGC	MS-V5	1	BYD2588

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510147-10 | **Client Sample Name:** JPL-GW, MW-21-2, 4/28/2015 12:30:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**160**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**54**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**63**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**360**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**300**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**180**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND	**A07**	3
Nitrate as N	**8.8**	**mg/L**	**0.20**	**0.036**	**EPA-300.0**	ND	**A07**	3
Sulfate	**170**	**mg/L**	**2.0**	**0.20**	**EPA-300.0**	ND	**A07**	3
pH	**7.34**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**900**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	**0.027**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND	**J**	6
Perchlorate	**2.8**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/12/15	05/12/15 18:12	JRG	PE-OP2	1	BYE1010
2	SM-2320B	04/29/15	04/29/15 17:10	RML	MET-1	2	BYD2562
3	EPA-300.0	04/29/15	04/29/15 13:18	OLH	IC5	2	BYD2547
4	EPA-150.1	04/29/15	04/29/15 17:10	RML	MET-1	1	BYD2562
5	EPA-160.1	04/30/15	04/30/15 13:00	CAD	MANUAL	5	BYD2637
6	EPA-353.2	04/28/15	04/28/15 23:16	BMW	KONE-1	1	BYD2670
7	EPA-314.0	05/12/15	05/12/15 17:54	BMW	IC6	1	BYE1105

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510147-10 | **Client Sample Name:** JPL-GW, MW-21-2, 4/28/2015 12:30:00PM, Blaine Tech

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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.73**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.92	**J**	2
Total Recoverable Iron	**100**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 22:43	BMW	KONE-1	1	BYD2671
2	EPA-200.8	05/05/15	05/05/15 23:33	EAR	PE-EL2	1	BYE0344
3	EPA-200.7	05/12/15	05/12/15 18:12	JRG	PE-OP2	1	BYE1010

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-11 | **Client Sample Name:** JPL-GW, DUP-7-2Q15, 4/28/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.34**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-11 | **Client Sample Name:** JPL-GW, DUP-7-2Q15, 4/28/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	**0.14**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.23**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510147-11 | **Client Sample Name:** JPL-GW, DUP-7-2Q15, 4/28/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/15	04/30/15 13:19	MGC	MS-V5	1	BYD2588

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510147-11 | **Client Sample Name:** JPL-GW, DUP-7-2Q15, 4/28/2015 12:40:00PM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/15	04/30/15 13:19	MGC	MS-V5	1	BYD2588

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510147-11 | **Client Sample Name:** JPL-GW, DUP-7-2Q15, 4/28/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**160**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**53**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**63**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**360**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**300**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**180**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND	**A07**	3
Nitrate as N	**8.9**	**mg/L**	**0.20**	**0.036**	**EPA-300.0**	ND	**A07**	3
Sulfate	**180**	**mg/L**	**2.0**	**0.20**	**EPA-300.0**	ND	**A07**	3
pH	**7.33**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**860**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	**0.026**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND	**J**	6
Perchlorate	**2.3**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/12/15	05/12/15 18:15	JRG	PE-OP2	1	BYE1010
2	SM-2320B	04/29/15	04/29/15 17:17	RML	MET-1	2	BYD2562
3	EPA-300.0	04/29/15	04/29/15 13:35	OLH	IC5	2	BYD2547
4	EPA-150.1	04/29/15	04/29/15 17:17	RML	MET-1	1	BYD2562
5	EPA-160.1	04/30/15	04/30/15 13:00	CAD	MANUAL	5	BYD2637
6	EPA-353.2	04/28/15	04/28/15 23:16	BMW	KONE-1	1	BYD2670
7	EPA-314.0	05/12/15	05/12/15 18:08	BMW	IC6	1	BYE1105

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510147-11 | **Client Sample Name:** JPL-GW, DUP-7-2Q15, 4/28/2015 12:40:00PM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.56**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.92	**J**	2
Total Recoverable Iron	**79**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/28/15	04/28/15 22:43	BMW	KONE-1	1	BYD2671
2	EPA-200.8	05/05/15	05/05/15 23:36	EAR	PE-EL2	1	BYE0344
3	EPA-200.7	05/12/15	05/12/15 18:15	JRG	PE-OP2	1	BYE1010

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2588						
Benzene	BYD2588-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYD2588-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYD2588-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYD2588-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYD2588-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYD2588-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYD2588-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYD2588-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYD2588-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYD2588-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYD2588-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYD2588-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYD2588-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYD2588-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYD2588-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYD2588-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYD2588-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYD2588-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYD2588-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYD2588-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYD2588-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYD2588-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYD2588-BLK1	ND	ug/L	0.50	0.14	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2588						
trans-1,3-Dichloropropene	BYD2588-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYD2588-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYD2588-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYD2588-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BYD2588-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYD2588-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYD2588-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYD2588-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYD2588-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYD2588-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYD2588-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYD2588-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYD2588-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYD2588-BLK1	ND	ug/L	0.50	0.12	
Acetone	BYD2588-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BYD2588-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BYD2588-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BYD2588-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BYD2588-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BYD2588-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BYD2588-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BYD2588-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BYD2588-BLK1	ND	ug/L	4.0	0.97	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2588						
Ethyl t-butyl ether	BYD2588-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BYD2588-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BYD2588-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BYD2588-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BYD2588-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BYD2588-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BYD2588-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BYD2588-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BYD2588-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BYD2588-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BYD2588-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYD2588-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYD2588-BLK1**	**94.3**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYD2588-BLK1**	**100**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYD2588-BLK1**	**93.2**	%	**80 - 120 (LCL - UCL)**		

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2588										
Benzene	BYD2588-BS1	LCS	24.470	25.000	ug/L	97.9		70 - 130		
Bromodichloromethane	BYD2588-BS1	LCS	24.510	25.000	ug/L	98.0		70 - 130		
Chlorobenzene	BYD2588-BS1	LCS	25.780	25.000	ug/L	103		70 - 130		
Chloroethane	BYD2588-BS1	LCS	23.530	25.000	ug/L	94.1		70 - 130		
1,4-Dichlorobenzene	BYD2588-BS1	LCS	24.940	25.000	ug/L	99.8		70 - 130		
1,1-Dichloroethane	BYD2588-BS1	LCS	23.490	25.000	ug/L	94.0		70 - 130		
1,1-Dichloroethene	BYD2588-BS1	LCS	23.700	25.000	ug/L	94.8		70 - 130		
Toluene	BYD2588-BS1	LCS	25.310	25.000	ug/L	101		70 - 130		
Trichloroethene	BYD2588-BS1	LCS	26.030	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYD2588-BS1	LCS	9.5600	10.000	ug/L	95.6		75 - 125		
Toluene-d8 (Surrogate)	BYD2588-BS1	LCS	9.9000	10.000	ug/L	99.0		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYD2588-BS1	LCS	9.8700	10.000	ug/L	98.7		80 - 120		

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2588	Used client sample: Y - Description: MW-18-5, 04/28/2015 06:50										
Benzene	MS	1510147-03	ND	25.190	25.000	ug/L		101		70 - 130	
	MSD	1510147-03	ND	23.810	25.000	ug/L	5.6	95.2	20	70 - 130	
Bromodichloromethane	MS	1510147-03	ND	25.380	25.000	ug/L		102		70 - 130	
	MSD	1510147-03	ND	24.860	25.000	ug/L	2.1	99.4	20	70 - 130	
Chlorobenzene	MS	1510147-03	ND	25.230	25.000	ug/L		101		70 - 130	
	MSD	1510147-03	ND	25.540	25.000	ug/L	1.2	102	20	70 - 130	
Chloroethane	MS	1510147-03	ND	24.010	25.000	ug/L		96.0		70 - 130	
	MSD	1510147-03	ND	22.760	25.000	ug/L	5.3	91.0	20	70 - 130	
1,4-Dichlorobenzene	MS	1510147-03	ND	24.860	25.000	ug/L		99.4		70 - 130	
	MSD	1510147-03	ND	25.150	25.000	ug/L	1.2	101	20	70 - 130	
1,1-Dichloroethane	MS	1510147-03	ND	23.840	25.000	ug/L		95.4		70 - 130	
	MSD	1510147-03	ND	22.890	25.000	ug/L	4.1	91.6	20	70 - 130	
1,1-Dichloroethene	MS	1510147-03	ND	24.220	25.000	ug/L		96.9		70 - 130	
	MSD	1510147-03	ND	22.860	25.000	ug/L	5.8	91.4	20	70 - 130	
Toluene	MS	1510147-03	ND	25.190	25.000	ug/L		101		70 - 130	
	MSD	1510147-03	ND	24.420	25.000	ug/L	3.1	97.7	20	70 - 130	
Trichloroethene	MS	1510147-03	ND	26.510	25.000	ug/L		106		70 - 130	
	MSD	1510147-03	ND	25.540	25.000	ug/L	3.7	102	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1510147-03	ND	8.8800	10.000	ug/L		88.8		75 - 125	
	MSD	1510147-03	ND	8.8700	10.000	ug/L	0.1	88.7		75 - 125	
Toluene-d8 (Surrogate)	MS	1510147-03	ND	9.8900	10.000	ug/L		98.9		80 - 120	
	MSD	1510147-03	ND	9.9200	10.000	ug/L	0.3	99.2		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1510147-03	ND	9.2600	10.000	ug/L		92.6		80 - 120	
	MSD	1510147-03	ND	10.160	10.000	ug/L	9.3	102		80 - 120	

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2588						
Chloroacetonitrile	BYD2588-BLK1	0	ug/L			
1-Chlorobutane	BYD2588-BLK1	0	ug/L			
1,1-Dichloropropanone	BYD2588-BLK1	0	ug/L			
Methyl acrylate	BYD2588-BLK1	0	ug/L			
Nitrobenzene	BYD2588-BLK1	0	ug/L			
2-Nitropropane	BYD2588-BLK1	0	ug/L			

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2504						
Bicarbonate	BYD2504-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2504-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2504-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2547						
Chloride	BYD2547-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD2547-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD2547-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYD2562						
Bicarbonate	BYD2562-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYD2562-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYD2562-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYD2637						
Total Dissolved Solids @ 180 C	BYD2637-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYD2670						
Nitrite as N	BYD2670-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYE0762						
Total Dissolved Solids @ 180 C	BYE0762-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYE1010						
Total Recoverable Calcium	**BYE1010-BLK1**	**0.014848**	**mg/L**	**0.10**	**0.014**	**J**
Total Recoverable Magnesium	BYE1010-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	BYE1010-BLK1	ND	mg/L	0.50	0.017	
Total Recoverable Potassium	BYE1010-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE1104						
Perchlorate	BYE1104-BLK1	ND	ug/L	4.0	1.3	
QC Batch ID: BYE1105						
Perchlorate	BYE1105-BLK1	ND	ug/L	4.0	1.3	

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2504										
Total Alkalinity as CaCO3	BYD2504-BS3	LCS	99.650	100.00	mg/L	99.6		90 - 110		
pH	BYD2504-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD2547										
Chloride	BYD2547-BS1	LCS	52.462	50.000	mg/L	105		90 - 110		
Nitrate as N	BYD2547-BS1	LCS	5.2030	5.0000	mg/L	104		90 - 110		
Sulfate	BYD2547-BS1	LCS	103.86	100.00	mg/L	104		90 - 110		
QC Batch ID: BYD2562										
Total Alkalinity as CaCO3	BYD2562-BS3	LCS	95.390	100.00	mg/L	95.4		90 - 110		
pH	BYD2562-BS2	LCS	7.0300	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYD2637										
Total Dissolved Solids @ 180 C	BYD2637-BS1	LCS	565.00	586.00	mg/L	96.4		90 - 110		
QC Batch ID: BYD2670										
Nitrite as N	BYD2670-BS1	LCS	0.51265	0.50000	mg/L	103		90 - 110		
QC Batch ID: BYE0762										
Total Dissolved Solids @ 180 C	BYE0762-BS1	LCS	550.00	586.00	mg/L	93.9		90 - 110		
QC Batch ID: BYE1010										
Total Recoverable Calcium	BYE1010-BS1	LCS	10.447	10.000	mg/L	104		85 - 115		
Total Recoverable Magnesium	BYE1010-BS1	LCS	10.984	10.000	mg/L	110		85 - 115		
Total Recoverable Sodium	BYE1010-BS1	LCS	10.634	10.000	mg/L	106		85 - 115		
Total Recoverable Potassium	BYE1010-BS1	LCS	10.336	10.000	mg/L	103		85 - 115		
QC Batch ID: BYE1104										
Perchlorate	BYE1104-BS1	LCS	10.232	10.000	ug/L	102		85 - 115		
QC Batch ID: BYE1105										
Perchlorate	BYE1105-BS1	LCS	9.1788	10.000	ug/L	91.8		85 - 115		

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Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2504	Used client sample: N										
Bicarbonate	DUP	1510134-02	71.974	71.974		mg/L	0		10		
Carbonate	DUP	1510134-02	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1510134-02	59.030	59.030		mg/L	0		10		
pH	DUP	1510134-02	7.2600	7.2700		pH Units	0.1		20		
QC Batch ID: BYD2547	Used client sample: Y - Description: EB-7-4/28/15, 04/28/2015 06:20										
Chloride	DUP	**1510147-02**	**0.18300**	**0.15600**		**mg/L**	**15.9**		**10**		**J,A02**
	MS	**1510147-02**	**0.18300**	**52.233**	**50.505**	**mg/L**		**103**		**80 - 120**	
	MSD	**1510147-02**	**0.18300**	**52.191**	**50.505**	**mg/L**	**0.1**	**103**	**10**	**80 - 120**	
Nitrate as N	DUP	1510147-02	0.026000	0.025000		mg/L	3.9		10		J
	MS	1510147-02	0.026000	5.2242	5.0505	mg/L		103		80 - 120	
	MSD	1510147-02	0.026000	5.2010	5.0505	mg/L	0.4	102	10	80 - 120	
Sulfate	DUP	1510147-02	0.28100	0.26700		mg/L	5.1		10		J
	MS	1510147-02	0.28100	104.02	101.01	mg/L		103		80 - 120	
	MSD	1510147-02	0.28100	103.93	101.01	mg/L	0.1	103	10	80 - 120	
QC Batch ID: BYD2562	Used client sample: Y - Description: MW-21-3, 04/28/2015 11:55										
Bicarbonate	DUP	1510147-09	352.07	354.29		mg/L	0.6		10		
Carbonate	DUP	1510147-09	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1510147-09	288.75	ND		mg/L			10		
pH	DUP	1510147-09	7.6800	7.6000		pH Units	1.0		20		
QC Batch ID: BYD2637	Used client sample: Y - Description: DUP-7-2Q15, 04/28/2015 12:40										
Total Dissolved Solids @ 180 C	DUP	1510147-11	860.00	865.00		mg/L	0.6		10		
QC Batch ID: BYD2670	Used client sample: Y - Description: EB-7-4/28/15, 04/28/2015 06:20										
Nitrite as N	DUP	1510147-02	ND	ND		mg/L			10		
	MS	1510147-02	ND	0.54443	0.52632	mg/L		103		90 - 110	
	MSD	1510147-02	ND	0.54173	0.52632	mg/L	0.5	103	10	90 - 110	
QC Batch ID: BYE0762	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1510800-01	780.00	800.00		mg/L	2.5		10		
QC Batch ID: BYE1010	Used client sample: Y - Description: MW-18-4, 04/28/2015 07:30										
Total Recoverable Calcium	DUP	**1510147-04RE1**	**35.397**	**36.786**		**mg/L**	**3.9**		**20**		
	MS	**1510147-04RE1**	**35.397**	**48.012**	**10.000**	**mg/L**		**126**		**75 - 125**	**Q03**
	MSD	**1510147-04RE1**	**35.397**	**47.603**	**10.000**	**mg/L**	**0.9**	**122**	**20**	**75 - 125**	
Total Recoverable Magnesium	DUP	510147-04RE1	11.116	11.550		mg/L	3.8		20		
	MS	510147-04RE1	11.116	22.485	10.000	mg/L		114		75 - 125	
	MSD	510147-04RE1	11.116	22.212	10.000	mg/L	1.2	111	20	75 - 125	

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE1010	Used client sample: Y - Description: MW-18-4, 04/28/2015 07:30										
Total Recoverable Sodium	DUP	510147-04RE´	31.892	33.208		mg/L	4.0		20		
	MS	510147-04RE´	31.892	44.309	10.000	mg/L		124		75 - 125	
	MSD	510147-04RE´	31.892	43.792	10.000	mg/L	1.2	119	20	75 - 125	
Total Recoverable Potassium	DUP	510147-04RE´	1.4045	1.4779		mg/L	5.1		20		
	MS	510147-04RE´	1.4045	11.718	10.000	mg/L		103		75 - 125	
	MSD	510147-04RE´	1.4045	11.579	10.000	mg/L	1.2	102	20	75 - 125	
QC Batch ID: BYE1104	Used client sample: Y - Description: EB-7-4/28/15, 04/28/2015 06:20										
Perchlorate	DUP	1510147-02	ND	ND		ug/L			15		
	MS	1510147-02	ND	10.389	10.101	ug/L		103		80 - 120	
	MSD	1510147-02	ND	11.272	10.101	ug/L	8.2	112	15	80 - 120	
QC Batch ID: BYE1105	Used client sample: Y - Description: MW-21-2, 04/28/2015 12:30										
Perchlorate	DUP	510147-10RE´	2.0129	2.0670		ug/L	2.7		15		J
	MS	510147-10RE´	2.0129	12.631	10.101	ug/L		105		80 - 120	
	MSD	510147-10RE´	2.0129	11.660	10.101	ug/L	8.0	95.5	15	80 - 120	

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Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2671						
Hexavalent Chromium	BYD2671-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYE0344						
Total Recoverable Arsenic	BYE0344-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	**BYE0344-BLK1**	**0.91500**	**ug/L**	**3.0**	**0.50**	**J**
Total Recoverable Lead	BYE0344-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYE1010						
Total Recoverable Iron	BYE1010-BLK1	ND	ug/L	50	6.5	

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Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2671										
Hexavalent Chromium	BYD2671-BS1	LCS	0.050441	0.050000	mg/L	101		85 - 115		
QC Batch ID: BYE0344										
Total Recoverable Arsenic	BYE0344-BS1	LCS	101.20	100.00	ug/L	101		85 - 115		
Total Recoverable Chromium	BYE0344-BS1	LCS	43.983	40.000	ug/L	110		85 - 115		
Total Recoverable Lead	BYE0344-BS1	LCS	107.92	100.00	ug/L	108		85 - 115		
QC Batch ID: BYE1010										
Total Recoverable Iron	BYE1010-BS1	LCS	1137.4	1000.0	ug/L	114		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/19/2015 12:59
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2671	Used client sample: Y - Description: EB-7-4/28/15, 04/28/2015 06:20										
Hexavalent Chromium	DUP	1510147-02	ND	ND		mg/L			10		
	MS	1510147-02	ND	0.052527	0.052632	mg/L		99.8		85 - 115	
	MSD	1510147-02	ND	0.052783	0.052632	mg/L	0.5	100	10	85 - 115	
QC Batch ID: BYE0344	Used client sample: Y - Description: EB-7-4/28/15, 04/28/2015 06:20										
Total Recoverable Arsenic	DUP	1510147-02	ND	ND		ug/L			20		
	MS	1510147-02	ND	98.103	100.00	ug/L		98.1		70 - 130	
	MSD	1510147-02	ND	97.104	100.00	ug/L	1.0	97.1	20	70 - 130	
Total Recoverable Chromium	DUP	1510147-02	0.75800	0.74800		ug/L	1.3		20		J
	MS	1510147-02	0.75800	43.520	40.000	ug/L		107		70 - 130	
	MSD	1510147-02	0.75800	41.718	40.000	ug/L	4.2	102	20	70 - 130	
Total Recoverable Lead	DUP	1510147-02	ND	ND		ug/L			20		
	MS	1510147-02	ND	107.39	100.00	ug/L		107		70 - 130	
	MSD	1510147-02	ND	103.51	100.00	ug/L	3.7	104	20	70 - 130	
QC Batch ID: BYE1010	Used client sample: Y - Description: MW-18-4, 04/28/2015 07:30										
Total Recoverable Iron	DUP	**1510147-04RE1**	**73.259**	**94.482**		**ug/L**	**25.3**		**20**		**A02**
	MS	**1510147-04RE1**	**73.259**	**1141.6**	**1000.0**	**ug/L**		**107**		**75 - 125**	
	MSD	**1510147-04RE1**	**73.259**	**1148.6**	**1000.0**	**ug/L**	**0.6**	**108**	**20**	**75 - 125**	

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Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/19/2015 12:59 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A02	The difference between duplicate readings is less than the quantitation limit.
A07	Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
Q03	Matrix spike recovery(s) is(are) not within the control limits.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

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Date of Report: 05/21/2015

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 2nd Qtr. 2015
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1510263
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 4/29/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.

Chain of Custody Form

*Required Fields

* Added per David Conner - MAO 4/30/15

Page 1 of 1

Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:* (614) 792 - 2897 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #: 15 - 10263

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)	Perch + pH	Notes
-1	TB-8-4/29/15	4-29-15	0630	AQ	X										
-2	MW-13		0720		X							*	*	*	
-3	MW-10		0905		X	X	X	X	X	X					
-4	MW-5		1055		X	X	X	X	X	X					
-5	MW-8		1240		X	X	X	X	X	X	X				
-6	MW-7		1410		X	X	X	X	X	X	X				Level IV

CHK BY DISTRIBUTION
SUB OUT ☐

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 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)

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By:	4-29-15	1700	1. Received By:	4-29-15	1705
2. Relinquished By:	4-29-15	2030	2. Received By:	4-29-15	2030
3. Relinquished By:			3. Received By:		

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 and Cooler Receipt Form for 1510263 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 1

Submission #: 15-10263

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time 4-29-15 2032

Temperature: (A) 2.3 °C / (C) 2.4 °C Analyst Init M

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL		D	D	D	D	D				
PT PE UNPRESERVED		E			E	E				
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		F	E	E	F	F				
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		ABC	ABC	ABC	ABC	ABC				
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER 8270		H1								
8 OZ. ~~JAR~~ Amber		G								
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By: KJB Date/Time: 4/29/15 2055 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510263-01	**COC Number:**	---	**Receive Date:**	04/29/2015 20:30
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2015 06:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-8-4/29/15	**Lab Matrix:**	Water
	Sampled By:	BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-8-4/29/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510263-02	**COC Number:**	---	**Receive Date:**	04/29/2015 20:30
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2015 07:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-13	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-13	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510263-03	**COC Number:**	---	**Receive Date:**	04/29/2015 20:30
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2015 09:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-10	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-10	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510263-04	**COC Number:**	---	**Receive Date:**	04/29/2015 20:30
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2015 10:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-5	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510263-05	**COC Number:**	---	**Receive Date:**	04/29/2015 20:30
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2015 12:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-8	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-8	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510263-06	**COC Number:**	---	**Receive Date:**	04/29/2015 20:30
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2015 14:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-7	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-7	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-01 | **Client Sample Name:** JPL-GW, TB-8-4/29/15, 4/29/2015 6:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-01 | **Client Sample Name:** JPL-GW, TB-8-4/29/15, 4/29/2015 6:30:00AM

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-01 | **Client Sample Name:** JPL-GW, TB-8-4/29/15, 4/29/2015 6:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.0	%	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	04/30/15	04/30/15 13:42	MGC	MS-V5	1	BYD2588

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510263-01 | **Client Sample Name:** JPL-GW, TB-8-4/29/15, 4/29/2015 6:30:00AM

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	04/30/15	04/30/15 13:42	MGC	MS-V5	1	BYD2588

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-02 | **Client Sample Name:** JPL-GW, MW-13, 4/29/2015 7:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**1.5**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-02 | **Client Sample Name:** JPL-GW, MW-13, 4/29/2015 7:20:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.31**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-02 | **Client Sample Name:** JPL-GW, MW-13, 4/29/2015 7:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.1	%	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	04/30/15	04/30/15 14:05	MGC	MS-V5	1	BYD2588

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510263-02 | **Client Sample Name:** JPL-GW, MW-13, 4/29/2015 7:20:00AM, 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	04/30/15	04/30/15 14:05	MGC	MS-V5	1	BYD2588

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

BCL Sample ID: 1510263-02 | **Client Sample Name:** JPL-GW, MW-13, 4/29/2015 7:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,4-Dioxane	ND	ug/L	1.0	0.21	EPA-8270C	ND		1
Naphthalene-d8 (Surrogate)	102	%	75 - 132 (LCL - UCL)		EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	04/30/15	05/04/15 22:42	MK1	MS-B7	1	BYE0307

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510263-02 | **Client Sample Name:** JPL-GW, MW-13, 4/29/2015 7:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**7.44**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	1
Perchlorate	**1500**	**ug/L**	**400**	**130**	**EPA-314.0**	ND	**A07**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-150.1	05/04/15	05/04/15 17:04	RML	MET-1	1	BYE0024
2	EPA-314.0	05/15/15	05/18/15 08:30	OLH	IC6	100	BYE1584

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-03 | **Client Sample Name:** JPL-GW, MW-10, 4/29/2015 9:05:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.83**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.15**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.19**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	**0.24**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-03 | **Client Sample Name:** JPL-GW, MW-10, 4/29/2015 9:05:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.71**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**6.8**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-03 | **Client Sample Name:** JPL-GW, MW-10, 4/29/2015 9:05:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.2	%	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	04/30/15	04/30/15 14:27	MGC	MS-V5	1	BYD2588

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510263-03 | **Client Sample Name:** JPL-GW, MW-10, 4/29/2015 9:05:00AM, 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	04/30/15	04/30/15 14:27	MGC	MS-V5	1	BYD2588

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510263-03 | **Client Sample Name:** JPL-GW, MW-10, 4/29/2015 9:05:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**140**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**52**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**38**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.029		1
Total Recoverable Potassium	**3.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**130**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**16**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**200**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.33**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**850**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**4.8**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/15	05/06/15 16:50	JRG	PE-OP2	1	BYE0480
2	SM-2320B	05/04/15	05/04/15 17:15	RML	MET-1	2	BYE0024
3	EPA-300.0	04/30/15	04/30/15 08:35	OLH	IC8	1	BYD2599
4	EPA-150.1	05/04/15	05/04/15 17:15	RML	MET-1	1	BYE0024
5	EPA-160.1	05/01/15	05/01/15 14:00	CAD	MANUAL	5	BYE0100
6	EPA-353.2	04/30/15	04/30/15 09:53	TDC	KONE-1	1	BYE0230
7	EPA-314.0	05/12/15	05/14/15 02:14	BMW	IC6	1	BYE1105

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510263-03 | **Client Sample Name:** JPL-GW, MW-10, 4/29/2015 9:05:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**3.4**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**100**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/15	04/30/15 02:21	TDC	KONE-1	5	BYE0202
2	EPA-200.8	05/07/15	05/12/15 03:10	EAR	PE-EL2	1	BYE0565
3	EPA-200.7	05/06/15	05/06/15 16:50	JRG	PE-OP2	1	BYE0480

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-04 | **Client Sample Name:** JPL-GW, MW-5, 4/29/2015 10:55:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.35**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-04 | **Client Sample Name:** JPL-GW, MW-5, 4/29/2015 10:55:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.26**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.3**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-04 | **Client Sample Name:** JPL-GW, MW-5, 4/29/2015 10:55:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.7	%	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	04/30/15	04/30/15 14:50	MGC	MS-V5	1	BYD2588

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510263-04 | **Client Sample Name:** JPL-GW, MW-5, 4/29/2015 10:55:00AM, 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	04/30/15	04/30/15 14:50	MGC	MS-V5	1	BYD2588

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Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510263-04 | **Client Sample Name:** JPL-GW, MW-5, 4/29/2015 10:55:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**82**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**27**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**30**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.029		1
Total Recoverable Potassium	**4.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**50**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**6.1**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**71**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.14**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**490**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**4.1**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/15	05/06/15 16:53	JRG	PE-OP2	1	BYE0480
2	SM-2320B	05/04/15	05/04/15 17:20	RML	MET-1	1	BYE0024
3	EPA-300.0	04/30/15	04/30/15 06:30	OLH	IC8	1	BYD2599
4	EPA-150.1	05/04/15	05/04/15 17:20	RML	MET-1	1	BYE0024
5	EPA-160.1	05/01/15	05/01/15 14:00	CAD	MANUAL	2	BYE0100
6	EPA-353.2	04/30/15	04/30/15 09:53	TDC	KONE-1	1	BYE0230
7	EPA-314.0	05/12/15	05/14/15 02:27	BMW	IC6	1	BYE1105

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510263-04 | **Client Sample Name:** JPL-GW, MW-5, 4/29/2015 10:55:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.010	0.0035	EPA-7196	ND	A07	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**53**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/15	04/30/15 02:21	TDC	KONE-1	5	BYE0202
2	EPA-200.8	05/07/15	05/12/15 03:13	EAR	PE-EL2	1	BYE0565
3	EPA-200.7	05/06/15	05/06/15 16:53	JRG	PE-OP2	1	BYE0480

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-05 | **Client Sample Name:** JPL-GW, MW-8, 4/29/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**0.20**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**4.1**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-05 | **Client Sample Name:** JPL-GW, MW-8, 4/29/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	**0.23**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-05 | **Client Sample Name:** JPL-GW, MW-8, 4/29/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.8	%	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	04/30/15	04/30/15 15:13	MGC	MS-V5	1	BYD2588

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510263-05 | **Client Sample Name:** JPL-GW, MW-8, 4/29/2015 12:40:00PM, Blaine Tech

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/15	04/30/15 15:13	MGC	MS-V5	1	BYD2588

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510263-05 | **Client Sample Name:** JPL-GW, MW-8, 4/29/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**64**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**22**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**23**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.029		1
Total Recoverable Potassium	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**180**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**150**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**58**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.6**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**41**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.42**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**370**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**71**	**ug/L**	**20**	**6.5**	**EPA-314.0**	ND	**A07**	7
ortho-Phosphate as P	**0.0082**	**mg/L**	**0.020**	**0.0057**	**EPA-365.1**	ND	**J**	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/15	05/06/15 16:55	JRG	PE-OP2	1	BYE0480
2	SM-2320B	05/04/15	05/04/15 17:26	RML	MET-1	1	BYE0024
3	EPA-300.0	04/30/15	04/30/15 06:47	OLH	IC8	1	BYD2599
4	EPA-150.1	05/04/15	05/04/15 17:26	RML	MET-1	1	BYE0024
5	EPA-160.1	05/01/15	05/01/15 14:00	CAD	MANUAL	2	BYE0100
6	EPA-353.2	04/30/15	04/30/15 09:33	TDC	KONE-1	1	BYE0230
7	EPA-314.0	05/15/15	05/18/15 14:55	OLH	IC6	5	BYE1584
8	EPA-365.1	04/30/15	04/30/15 09:01	TDC	KONE-1	1	BYE0223

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Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510263-05 | **Client Sample Name:** JPL-GW, MW-8, 4/29/2015 12:40:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0048**	**mg/L**	**0.010**	**0.0035**	**EPA-7196**	ND	**J,A07**	1
Total Recoverable Arsenic	**0.72**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**7.6**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**52**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/15	04/30/15 02:21	TDC	KONE-1	5	BYE0202
2	EPA-200.8	05/07/15	05/12/15 03:16	EAR	PE-EL2	1	BYE0565
3	EPA-200.7	05/06/15	05/06/15 16:55	JRG	PE-OP2	1	BYE0480

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Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-06 | **Client Sample Name:** JPL-GW, MW-7, 4/29/2015 2:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**0.60**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**4.4**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-06 | **Client Sample Name:** JPL-GW, MW-7, 4/29/2015 2:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510263-06 | **Client Sample Name:** JPL-GW, MW-7, 4/29/2015 2:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.9	%	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	04/30/15	04/30/15 15:35	MGC	MS-V5	1	BYD2588

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510263-06 | **Client Sample Name:** JPL-GW, MW-7, 4/29/2015 2:10:00PM, 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	04/30/15	04/30/15 15:35	MGC	MS-V5	1	BYD2588

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510263-06 | **Client Sample Name:** JPL-GW, MW-7, 4/29/2015 2:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**73**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**25**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**40**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.029		1
Total Recoverable Potassium	**3.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**87**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**1.3**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**49**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.49**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**490**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**7.4**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND		7
ortho-Phosphate as P	**0.027**	**mg/L**	**0.020**	**0.0057**	**EPA-365.1**	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/15	05/06/15 16:57	JRG	PE-OP2	1	BYE0480
2	SM-2320B	05/04/15	05/04/15 17:32	RML	MET-1	1	BYE0024
3	EPA-300.0	04/30/15	04/30/15 07:05	OLH	IC8	1	BYD2599
4	EPA-150.1	05/04/15	05/04/15 17:32	RML	MET-1	1	BYE0024
5	EPA-160.1	05/01/15	05/01/15 14:00	CAD	MANUAL	3.333	BYE0100
6	EPA-353.2	04/30/15	04/30/15 09:35	TDC	KONE-1	1	BYE0230
7	EPA-314.0	05/12/15	05/14/15 02:55	BMW	IC6	1	BYE1105
8	EPA-365.1	04/30/15	04/30/15 09:07	TDC	KONE-1	1	BYE0223

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Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510263-06 | **Client Sample Name:** JPL-GW, MW-7, 4/29/2015 2:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0066**	**mg/L**	**0.010**	**0.0035**	**EPA-7196**	ND	**J,A07**	1
Total Recoverable Arsenic	**0.82**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**83**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**2500**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/15	04/30/15 02:21	TDC	KONE-1	5	BYE0202
2	EPA-200.8	05/07/15	05/12/15 03:19	EAR	PE-EL2	1	BYE0565
3	EPA-200.7	05/06/15	05/06/15 16:57	JRG	PE-OP2	1	BYE0480

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Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2588						
Benzene	BYD2588-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYD2588-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYD2588-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYD2588-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYD2588-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYD2588-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYD2588-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYD2588-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYD2588-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYD2588-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYD2588-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYD2588-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYD2588-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYD2588-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYD2588-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYD2588-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYD2588-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYD2588-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYD2588-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYD2588-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYD2588-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYD2588-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYD2588-BLK1	ND	ug/L	0.50	0.14	

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2588						
trans-1,3-Dichloropropene	BYD2588-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYD2588-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYD2588-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYD2588-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BYD2588-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYD2588-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYD2588-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYD2588-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYD2588-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYD2588-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYD2588-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYD2588-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYD2588-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYD2588-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYD2588-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYD2588-BLK1	ND	ug/L	0.50	0.12	
Acetone	BYD2588-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BYD2588-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BYD2588-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BYD2588-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BYD2588-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BYD2588-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BYD2588-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BYD2588-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BYD2588-BLK1	ND	ug/L	4.0	0.97	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2588						
Ethyl t-butyl ether	BYD2588-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BYD2588-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BYD2588-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BYD2588-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BYD2588-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BYD2588-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BYD2588-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BYD2588-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BYD2588-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BYD2588-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BYD2588-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BYD2588-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYD2588-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYD2588-BLK1**	**94.3**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYD2588-BLK1**	**100**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYD2588-BLK1**	**93.2**	%	**80 - 120 (LCL - UCL)**		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2588										
Benzene	BYD2588-BS1	LCS	24.470	25.000	ug/L	97.9		70 - 130		
Bromodichloromethane	BYD2588-BS1	LCS	24.510	25.000	ug/L	98.0		70 - 130		
Chlorobenzene	BYD2588-BS1	LCS	25.780	25.000	ug/L	103		70 - 130		
Chloroethane	BYD2588-BS1	LCS	23.530	25.000	ug/L	94.1		70 - 130		
1,4-Dichlorobenzene	BYD2588-BS1	LCS	24.940	25.000	ug/L	99.8		70 - 130		
1,1-Dichloroethane	BYD2588-BS1	LCS	23.490	25.000	ug/L	94.0		70 - 130		
1,1-Dichloroethene	BYD2588-BS1	LCS	23.700	25.000	ug/L	94.8		70 - 130		
Toluene	BYD2588-BS1	LCS	25.310	25.000	ug/L	101		70 - 130		
Trichloroethene	BYD2588-BS1	LCS	26.030	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYD2588-BS1	LCS	9.5600	10.000	ug/L	95.6		75 - 125		
Toluene-d8 (Surrogate)	BYD2588-BS1	LCS	9.9000	10.000	ug/L	99.0		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYD2588-BS1	LCS	9.8700	10.000	ug/L	98.7		80 - 120		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2588	Used client sample: Y - Description: MW-18-5, 04/28/2015 06:50										
Benzene	MS	1510147-03	ND	25.190	25.000	ug/L		101		70 - 130	
	MSD	1510147-03	ND	23.810	25.000	ug/L	5.6	95.2	20	70 - 130	
Bromodichloromethane	MS	1510147-03	ND	25.380	25.000	ug/L		102		70 - 130	
	MSD	1510147-03	ND	24.860	25.000	ug/L	2.1	99.4	20	70 - 130	
Chlorobenzene	MS	1510147-03	ND	25.230	25.000	ug/L		101		70 - 130	
	MSD	1510147-03	ND	25.540	25.000	ug/L	1.2	102	20	70 - 130	
Chloroethane	MS	1510147-03	ND	24.010	25.000	ug/L		96.0		70 - 130	
	MSD	1510147-03	ND	22.760	25.000	ug/L	5.3	91.0	20	70 - 130	
1,4-Dichlorobenzene	MS	1510147-03	ND	24.860	25.000	ug/L		99.4		70 - 130	
	MSD	1510147-03	ND	25.150	25.000	ug/L	1.2	101	20	70 - 130	
1,1-Dichloroethane	MS	1510147-03	ND	23.840	25.000	ug/L		95.4		70 - 130	
	MSD	1510147-03	ND	22.890	25.000	ug/L	4.1	91.6	20	70 - 130	
1,1-Dichloroethene	MS	1510147-03	ND	24.220	25.000	ug/L		96.9		70 - 130	
	MSD	1510147-03	ND	22.860	25.000	ug/L	5.8	91.4	20	70 - 130	
Toluene	MS	1510147-03	ND	25.190	25.000	ug/L		101		70 - 130	
	MSD	1510147-03	ND	24.420	25.000	ug/L	3.1	97.7	20	70 - 130	
Trichloroethene	MS	1510147-03	ND	26.510	25.000	ug/L		106		70 - 130	
	MSD	1510147-03	ND	25.540	25.000	ug/L	3.7	102	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1510147-03	ND	8.8800	10.000	ug/L		88.8		75 - 125	
	MSD	1510147-03	ND	8.8700	10.000	ug/L	0.1	88.7		75 - 125	
Toluene-d8 (Surrogate)	MS	1510147-03	ND	9.8900	10.000	ug/L		98.9		80 - 120	
	MSD	1510147-03	ND	9.9200	10.000	ug/L	0.3	99.2		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1510147-03	ND	9.2600	10.000	ug/L		92.6		80 - 120	
	MSD	1510147-03	ND	10.160	10.000	ug/L	9.3	102		80 - 120	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2588						
Chloroacetonitrile	BYD2588-BLK1	0	ug/L			
1-Chlorobutane	BYD2588-BLK1	0	ug/L			
1,1-Dichloropropanone	BYD2588-BLK1	0	ug/L			
Methyl acrylate	BYD2588-BLK1	0	ug/L			
Nitrobenzene	BYD2588-BLK1	0	ug/L			
2-Nitropropane	BYD2588-BLK1	0	ug/L			

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Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/21/2015 13:00 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYE0307						
1,4-Dioxane	BYE0307-BLK1	ND	ug/L	1.0	0.21	
Naphthalene-d8 (Surrogate)	**BYE0307-BLK1**	**104**	%	**75 - 132 (LCL - UCL)**		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0307										
1,4-Dioxane	BYE0307-BS1	LCS	39.510	50.000	ug/L	79.0		70 - 130		
Naphthalene-d8 (Surrogate)	BYE0307-BS1	LCS	37.848	40.000	ug/L	94.6		75 - 132		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0307	Used client sample: N										
1,4-Dioxane	MS	1506890-77	ND	41.691	50.000	ug/L		83.4		70 - 130	
	MSD	1506890-77	ND	43.382	50.000	ug/L	4.0	86.8	30	70 - 130	
Naphthalene-d8 (Surrogate)	MS	1506890-77	ND	37.296	40.000	ug/L		93.2		75 - 132	
	MSD	1506890-77	ND	36.848	40.000	ug/L	1.2	92.1		75 - 132	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYD2599						
Chloride	BYD2599-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYD2599-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYD2599-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE0024						
Bicarbonate	BYE0024-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYE0024-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYE0024-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYE0100						
Total Dissolved Solids @ 180 C	BYE0100-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYE0223						
ortho-Phosphate as P	BYE0223-BLK1	ND	mg/L	0.020	0.0057	
QC Batch ID: BYE0230						
Nitrite as N	BYE0230-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYE0480						
Total Recoverable Calcium	BYE0480-BLK1	ND	mg/L	0.10	0.014	
Total Recoverable Magnesium	BYE0480-BLK1	ND	mg/L	0.050	0.019	
Total Recoverable Sodium	**BYE0480-BLK1**	**0.029444**	**mg/L**	**0.50**	**0.017**	**J**
Total Recoverable Potassium	BYE0480-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE1105						
Perchlorate	BYE1105-BLK1	ND	ug/L	4.0	1.3	
QC Batch ID: BYE1584						
Perchlorate	BYE1584-BLK1	ND	ug/L	4.0	1.3	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2599										
Chloride	BYD2599-BS1	LCS	54.010	50.000	mg/L	108		90 - 110		
Nitrate as N	BYD2599-BS1	LCS	5.3640	5.0000	mg/L	107		90 - 110		
Sulfate	BYD2599-BS1	LCS	107.57	100.00	mg/L	108		90 - 110		
QC Batch ID: BYE0024										
Total Alkalinity as CaCO3	BYE0024-BS3	LCS	101.47	100.00	mg/L	101		90 - 110		
pH	BYE0024-BS2	LCS	6.9900	7.0000	pH Units	99.9		95 - 105		
QC Batch ID: BYE0100										
Total Dissolved Solids @ 180 C	BYE0100-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
QC Batch ID: BYE0223										
ortho-Phosphate as P	BYE0223-BS1	LCS	0.20370	0.20000	mg/L	102		90 - 110		
QC Batch ID: BYE0230										
Nitrite as N	BYE0230-BS1	LCS	0.51470	0.50000	mg/L	103		90 - 110		
QC Batch ID: BYE0480										
Total Recoverable Calcium	BYE0480-BS1	LCS	10.433	10.000	mg/L	104		85 - 115		
Total Recoverable Magnesium	BYE0480-BS1	LCS	11.067	10.000	mg/L	111		85 - 115		
Total Recoverable Sodium	BYE0480-BS1	LCS	10.547	10.000	mg/L	105		85 - 115		
Total Recoverable Potassium	BYE0480-BS1	LCS	10.204	10.000	mg/L	102		85 - 115		
QC Batch ID: BYE1105										
Perchlorate	BYE1105-BS1	LCS	9.1788	10.000	ug/L	91.8		85 - 115		
QC Batch ID: BYE1584										
Perchlorate	BYE1584-BS1	LCS	9.6977	10.000	ug/L	97.0		85 - 115		

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2599	Used client sample: N										
Chloride	DUP	1510205-01	39.497	39.542		mg/L	0.1		10		
	MS	1510205-01	39.497	94.617	50.505	mg/L		109		80 - 120	
	MSD	1510205-01	39.497	94.556	50.505	mg/L	0.1	109	10	80 - 120	
Nitrate as N	DUP	1510205-01	9.0690	9.0720		mg/L	0.0		10		
	MS	1510205-01	9.0690	14.336	5.0505	mg/L		104		80 - 120	
	MSD	1510205-01	9.0690	14.306	5.0505	mg/L	0.2	104	10	80 - 120	
Sulfate	DUP	1510205-01	37.969	37.938		mg/L	0.1		10		
	MS	1510205-01	37.969	150.10	101.01	mg/L		111		80 - 120	
	MSD	1510205-01	37.969	149.93	101.01	mg/L	0.1	111	10	80 - 120	
QC Batch ID: BYE0024	Used client sample: Y - Description: MW-13, 04/29/2015 07:20										
Bicarbonate	DUP	1510263-02	119.27	116.86		mg/L	2.0		10		
Carbonate	DUP	1510263-02	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1510263-02	97.820	95.840		mg/L	2.0		10		
pH	DUP	1510263-02	7.4400	7.4200		pH Units	0.3		20		
QC Batch ID: BYE0100	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1510295-11	16700	16900		mg/L	1.2		10		
QC Batch ID: BYE0223	Used client sample: N										
ortho-Phosphate as P	DUP	1510286-01	ND	ND		mg/L			10		
	MS	1510286-01	ND	0.20330	0.21053	mg/L		96.6		90 - 110	
	MSD	1510286-01	ND	0.20351	0.21053	mg/L	0.1	96.7	10	90 - 110	
QC Batch ID: BYE0230	Used client sample: N										
Nitrite as N	DUP	1510286-01	0.019683	ND		mg/L			10		
	MS	1510286-01	0.019683	0.52654	0.52632	mg/L		96.3		90 - 110	
	MSD	1510286-01	0.019683	0.52394	0.52632	mg/L	0.5	95.8	10	90 - 110	
QC Batch ID: BYE0480	Used client sample: N										
Total Recoverable Calcium	DUP	**1510196-01**	**410.14**	**396.56**		**mg/L**	**3.4**		**20**		
	MS	**1510196-01**	**410.14**	**415.09**	**10.000**	**mg/L**		**49.5**		**75 - 125**	**A03**
	MSD	**1510196-01**	**410.14**	**432.22**	**10.000**	**mg/L**	**4.0**	**221**	**20**	**75 - 125**	**A03**
Total Recoverable Magnesium	DUP	1510196-01	4.4694	4.3039		mg/L	3.8		20		
	MS	1510196-01	4.4694	15.135	10.000	mg/L		107		75 - 125	
	MSD	1510196-01	4.4694	15.392	10.000	mg/L	1.7	109	20	75 - 125	
Total Recoverable Sodium	DUP	**1510196-01**	**1542.4**	**1498.0**		**mg/L**	**2.9**		**20**		
	MS	**1510196-01**	**1542.4**	**1541.3**	**10.000**	**mg/L**		**-11.1**		**75 - 125**	**A03**
	MSD	**1510196-01**	**1542.4**	**1628.9**	**10.000**	**mg/L**	**5.5**	**865**	**20**	**75 - 125**	**A03**

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0480	Used client sample: N										
Total Recoverable Potassium	DUP	1510196-01	20.399	19.727		mg/L	3.4		20		
	MS	1510196-01	20.399	30.624	10.000	mg/L		102		75 - 125	
	MSD	1510196-01	20.399	31.564	10.000	mg/L	3.0	112	20	75 - 125	
QC Batch ID: BYE1105	Used client sample: Y - Description: MW-21-2, 04/28/2015 12:30										
Perchlorate	DUP	510147-10RE´	2.0129	2.0670		ug/L	2.7		15		J
	MS	510147-10RE´	2.0129	12.631	10.101	ug/L		105		80 - 120	
	MSD	510147-10RE´	2.0129	11.660	10.101	ug/L	8.0	95.5	15	80 - 120	
QC Batch ID: BYE1584	Used client sample: Y - Description: FBROUT, 05/14/2015 09:58										
Perchlorate	DUP	511907-04RE´	ND	ND		ug/L			15		
	MS	511907-04RE´	ND	9.1101	10.101	ug/L		90.2		80 - 120	
	MSD	511907-04RE´	ND	9.8879	10.101	ug/L	8.2	97.9	15	80 - 120	

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYE0202						
Hexavalent Chromium	BYE0202-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYE0480						
Total Recoverable Iron	BYE0480-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BYE0565						
Total Recoverable Arsenic	BYE0565-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BYE0565-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BYE0565-BLK1	ND	ug/L	1.0	0.10	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0202										
Hexavalent Chromium	BYE0202-BS1	LCS	0.050356	0.050000	mg/L	101		85 - 115		
QC Batch ID: BYE0480										
Total Recoverable Iron	BYE0480-BS1	LCS	1067.9	1000.0	ug/L	107		85 - 115		
QC Batch ID: BYE0565										
Total Recoverable Arsenic	BYE0565-BS1	LCS	98.739	100.00	ug/L	98.7		85 - 115		
Total Recoverable Chromium	BYE0565-BS1	LCS	40.738	40.000	ug/L	102		85 - 115		
Total Recoverable Lead	BYE0565-BS1	LCS	101.34	100.00	ug/L	101		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 13:00
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0202	Used client sample: N										
Hexavalent Chromium	DUP	**1510264-12**	**ND**	**ND**		**mg/L**			**10**		
	MS	**1510264-12**	**ND**	**0.17692**	**0.26316**	**mg/L**		**67.2**		**85 - 115**	**Q03**
	MSD	**1510264-12**	**ND**	**0.17697**	**0.26316**	**mg/L**	**0.0**	**67.2**	**10**	**85 - 115**	**Q03**
QC Batch ID: BYE0480	Used client sample: N										
Total Recoverable Iron	DUP	**1510196-01**	**4940.4**	**4477.0**		**ug/L**	**9.8**		**20**		
	MS	**1510196-01**	**4940.4**	**5554.6**	**1000.0**	**ug/L**		**61.4**		**75 - 125**	**A03**
	MSD	**1510196-01**	**4940.4**	**6544.4**	**1000.0**	**ug/L**	**16.4**	**160**	**20**	**75 - 125**	**A03**
QC Batch ID: BYE0565	Used client sample: N										
Total Recoverable Arsenic	DUP	1510292-18	ND	ND		ug/L			20		
	MS	1510292-18	ND	96.369	100.00	ug/L		96.4		70 - 130	
	MSD	1510292-18	ND	97.309	100.00	ug/L	1.0	97.3	20	70 - 130	
Total Recoverable Chromium	DUP	1510292-18	7.6380	ND		ug/L			20		
	MS	1510292-18	7.6380	40.296	40.000	ug/L		81.6		70 - 130	
	MSD	1510292-18	7.6380	41.129	40.000	ug/L	2.0	83.7	20	70 - 130	
Total Recoverable Lead	DUP	1510292-18	ND	ND		ug/L			20		
	MS	1510292-18	ND	100.18	100.00	ug/L		100		70 - 130	
	MSD	1510292-18	ND	100.08	100.00	ug/L	0.1	100	20	70 - 130	

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Analytical Laboratory Service Since 1964

Certificate of Analysis

Report Date: 05/11/15 09:52
Received Date: 05/04/15 10:30
Turnaround Time: Normal

Project: 1510263

Phones: (661) 327-4911
Fax: (661) 327-1918

P.O. #:

Attn: Misty Orton

Client: BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308

Dear Misty Orton :

Enclosed are the results of analyses for samples received 5/4/2015 with the Chain of Custody document. The samples were received in good condition, at 11.4 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab ID: 5E04015-01 **Sample ID: 1510263-02** **Matrix:** Water
Sampled by: Client **Sampled: 04/29/15 07:20**

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
N-Nitrosodiethylamine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 8:45	W5E0175	
N-Nitrosodimethylamine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 8:45	W5E0175	
N-Nitrosodi-n-butylamine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 8:45	W5E0175	
N-Nitrosodi-n-propylamine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 8:45	W5E0175	
N-Nitrosomethylethylamine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 8:45	W5E0175	
N-Nitrosomorpholine	**2.0**		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 8:45	W5E0175	
N-Nitrosopiperidine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 8:45	W5E0175	
N-Nitrosopyrrolidine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 8:45	W5E0175	

5E04015 Page 1 of 3

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www.weklab.com

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Quality Control Section

Nitrosamines by isotopic dilution GC/MS CI Mode - Quality Control

Batch W5E0175 - EPA 1625M

Blank (W5E0175-BLK1) — **Prepared: 05/05/15 Analyzed: 05/07/15 11:59**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		ND		ng/l					
N-Nitrosomethylethylamine		ND		ng/l					
N-Nitrosodiethylamine		ND		ng/l					
N-Nitrosodi-n-propylamine		ND		ng/l					
N-Nitrosomorpholine		ND		ng/l					
N-Nitrosopyrrolidine		ND		ng/l					
N-Nitrosopiperidine		ND		ng/l					
N-Nitrosodi-n-butylamine		ND		ng/l					

LCS (W5E0175-BS1) — **Prepared: 05/05/15 Analyzed: 05/07/15 12:29**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		3.02		ng/l	3.00	101	50-150		
N-Nitrosomethylethylamine		3.36		ng/l	3.00	112	50-150		
N-Nitrosodiethylamine		3.00		ng/l	3.00	100	50-150		
N-Nitrosodi-n-propylamine		2.56		ng/l	3.00	85	50-150		
N-Nitrosomorpholine		3.51		ng/l	3.00	117	50-150		
N-Nitrosopyrrolidine		3.76		ng/l	3.00	125	50-150		
N-Nitrosopiperidine		3.76		ng/l	3.00	125	50-150		
N-Nitrosodi-n-butylamine		2.54		ng/l	3.00	85	50-150		

LCS Dup (W5E0175-BSD1) — **Prepared: 05/05/15 Analyzed: 05/07/15 12:57**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		2.98		ng/l	3.00	99	50-150	1	30
N-Nitrosomethylethylamine		3.33		ng/l	3.00	111	50-150	0.9	30
N-Nitrosodiethylamine		3.27		ng/l	3.00	109	50-150	9	30
N-Nitrosodi-n-propylamine		2.70		ng/l	3.00	90	50-150	6	30
N-Nitrosomorpholine		3.44		ng/l	3.00	115	50-150	2	30
N-Nitrosopyrrolidine		3.84		ng/l	3.00	128	50-150	2	30
N-Nitrosopiperidine		3.57		ng/l	3.00	119	50-150	5	30
N-Nitrosodi-n-butylamine		2.56		ng/l	3.00	85	50-150	0.7	30

Weck Laboratories, Inc. 14859 East Clark Avenue City of Industry California 91745-1399 (626) 336-2139 FAX: (626) 336-2634
www.wecklabs.com

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WECK LABORATORIES, INC.
Analytical Laboratory Services Since 1964

Certificate of Analysis

Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Authorized Signature
Contact: Kim G Tu
(Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity
NR	Not Reportable

5E04015 Page 3 of 3

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Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/21/2015 13:00 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A03	The sample concentration is more than 4 times the spike level.
A07	Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
Q03	Matrix spike recovery(s) is(are) not within the control limits.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

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Date of Report: 05/21/2015

David Conner

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Client Project: 2nd Qtr. 2015
BCL Project: JPL- GW Monitoring Wells
BCL Work Order: 1510365
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 4/30/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.

Chain of Custody Form

*Required Fields

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Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:* (614) 792 - 2897 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #: 15-10365

Project Description:* JPL-GW Monitoring
Project Code:* 2nd Qtr. 2015
Sampler (s):* Blaine Tech

Billing
Client:* Tidewater, Inc. (P.O. #1213-000-02)
Attn:* As directed by Ben Headington
Address:* 6625 Selnick Drive, Suite A
City:* Elkridge State:* MD Zip:* 21075
Are there any tests with holding times? less than or equal to 48 hours?
☑ Yes ☐ No
*Standard Turnaround = 10

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr, Pb, As, Ca, Mg, K,	Na, Fe	Hexavalent Cr6 -7196 (mg/L)	Cl, NO3, NO2, SO4, Perch.,	CO3, HCO3, Alk., TDS, pH	Orthophosphate 365.1	1,4 Dioxane 8270SIM	NDMA (521)	Notes
-1	TB-9-4/30/15	4-30-15	0730	AQ	X									
-2	MW-1	↓	0846	↓	X	X	X	X	X	X				
-3	DUP-8-2015		0856		X	X	X	X	X	X				
-4	MW-9		1020		X	X	X	X	X	X				
-5	MW-15		1124		X	X	X	X	X	X				
-6	MW-6		1241		X	X	X	X	X	X				MS/MSD
-7	MW-16	↓	1310	↓	X							X	X	VOC's, Perchlorate, pH, 1,4-Dioxane NDMA only

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
SUB-OUT ☐

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

Turnaround # of working days:* ☐ 24 Hr Rush ☐ 48 Hr Rush ☐ 3-5 Day Rush ☑ Normal (10 – Days)
Lab TAT Approval: _____ *Additional Charges May Apply

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

☐ MBU Site
☐ CVX RCRA
☐ Geotracker 5 File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By:	4-30-15	1515	1.Received By: Nicole	4/30/15	1515
2. Relinquished By: Nic	4/30/15	1530	2.Received By:	4-30-15	1530
3. Relinquished By:	4-30-15	1838	3.Received By:	4.30.15	1838

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 and Cooler Receipt Form for 1510365 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 1

Submission #: 15-10365

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Federal Express ☐ UPS ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

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

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 208 Date/Time 4/30/15 1840

Temperature: (A) 0.3 °C / (C) 0.1 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL		D	D	D	D	G	D			
PT PE UNPRESERVED							E			
~~QT~~ INORGANIC CHEMICAL METALS		E	E	E	E	H	F			
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		ABC	ABC	ABC	ABC	A F	ABC			
QT EPA 413.1, 413.2, 418.1										
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 Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
~~8~~ 16 OZ. JAR 8270							G			
32 OZ. JAR							HI			
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____

Sample Numbering Completed By: M Date/Time: 4/30/15 1920 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]

A = Actual / C = Corrected

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510365-01	**COC Number:**	---	**Receive Date:**	04/30/2015 18:38
	Project Number:	JPL-GW	**Sampling Date:**	04/30/2015 07:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-9-4/30/15	**Lab Matrix:**	Water
	Sampled By:	BAT	**Sample Type:**	Blank Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-9-4/30/15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510365-02	**COC Number:**	---	**Receive Date:**	04/30/2015 18:38
	Project Number:	JPL-GW	**Sampling Date:**	04/30/2015 08:46
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-1	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510365-03	**COC Number:**	---	**Receive Date:**	04/30/2015 18:38
	Project Number:	JPL-GW	**Sampling Date:**	04/30/2015 08:56
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	Dup-8-2Q15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): Dup-8-2Q15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510365-04	**COC Number:**	---	**Receive Date:**	04/30/2015 18:38
	Project Number:	JPL-GW	**Sampling Date:**	04/30/2015 10:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-9	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-9	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510365-05	**COC Number:**	---	**Receive Date:**	04/30/2015 18:38
	Project Number:	JPL-GW	**Sampling Date:**	04/30/2015 11:24
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-15	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1510365-06	**COC Number:**	---	**Receive Date:**	04/30/2015 18:38
	Project Number:	JPL-GW	**Sampling Date:**	04/30/2015 12:41
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-6	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-6	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510365-07	**COC Number:**	---	**Receive Date:**	04/30/2015 18:38
	Project Number:	JPL-GW	**Sampling Date:**	04/30/2015 13:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-16	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-16	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Tidewater Inc.
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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-01 | **Client Sample Name:** JPL-GW, TB-9-4/30/15, 4/30/2015 7:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-01 | **Client Sample Name:** JPL-GW, TB-9-4/30/15, 4/30/2015 7:30:00AM

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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-01 | **Client Sample Name:** JPL-GW, TB-9-4/30/15, 4/30/2015 7:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	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	05/04/15	05/04/15 13:02	MGC	MS-V5	1	BYE0160

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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510365-01 | **Client Sample Name:** JPL-GW, TB-9-4/30/15, 4/30/2015 7:30:00AM

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	05/04/15	05/04/15 13:02	MGC	MS-V5	1	BYE0160

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-02 | **Client Sample Name:** JPL-GW, MW-1, 4/30/2015 8:46:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-02 | **Client Sample Name:** JPL-GW, MW-1, 4/30/2015 8:46:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-02 | **Client Sample Name:** JPL-GW, MW-1, 4/30/2015 8:46:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	91.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.1	%	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	05/04/15	05/04/15 13:24	MGC	MS-V5	1	BYE0160

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510365-02 | **Client Sample Name:** JPL-GW, MW-1, 4/30/2015 8:46:00AM, 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	05/04/15	05/04/15 13:24	MGC	MS-V5	1	BYE0160

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510365-02 | **Client Sample Name:** JPL-GW, MW-1, 4/30/2015 8:46:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**55**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	0.028		1
Total Recoverable Magnesium	**18**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.025		1
Total Recoverable Sodium	**30**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.035		1
Total Recoverable Potassium	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**15**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**27**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.67**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**290**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/07/15	05/07/15 20:03	JRG	PE-OP2	1	BYE0571
2	SM-2320B	05/05/15	05/05/15 08:58	RML	MET-1	1	BYE0293
3	EPA-300.0	04/30/15	05/01/15 01:41	OLH	IC2	1	BYE0039
4	EPA-150.1	05/05/15	05/05/15 08:58	RML	MET-1	1	BYE0293
5	EPA-160.1	05/04/15	05/04/15 11:00	CAD	MANUAL	2	BYE0158
6	EPA-353.2	05/01/15	05/01/15 15:50	TDC	KONE-1	1	BYE0242
7	EPA-314.0	05/14/15	05/14/15 16:35	BMW	IC6	1	BYE1312

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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510365-02 | **Client Sample Name:** JPL-GW, MW-1, 4/30/2015 8:46:00AM, 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 Arsenic	**0.95**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.0**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.54	**J**	2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/01/15	05/01/15 00:37	BMW	KONE-1	1	BYE0238
2	EPA-200.8	05/07/15	05/09/15 01:42	EAR	PE-EL2	1	BYE0570
3	EPA-200.7	05/07/15	05/08/15 18:29	JRG	PE-OP2	1	BYE0571

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-03 | **Client Sample Name:** JPL-GW, Dup-8-2Q15, 4/30/2015 8:56:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-03 | **Client Sample Name:** JPL-GW, Dup-8-2Q15, 4/30/2015 8:56:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-03 | **Client Sample Name:** JPL-GW, Dup-8-2Q15, 4/30/2015 8:56:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	90.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.6	%	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	05/04/15	05/04/15 13:47	MGC	MS-V5	1	BYE0160

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510365-03 | **Client Sample Name:** JPL-GW, Dup-8-2Q15, 4/30/2015 8:56:00AM, 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	05/04/15	05/04/15 13:47	MGC	MS-V5	1	BYE0160

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510365-03 | **Client Sample Name:** JPL-GW, Dup-8-2Q15, 4/30/2015 8:56:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**56**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	0.028		1
Total Recoverable Magnesium	**18**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.025		1
Total Recoverable Sodium	**31**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.035		1
Total Recoverable Potassium	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**15**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.018	EPA-300.0	ND		3
Sulfate	**27**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.69**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**290**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/07/15	05/07/15 20:12	JRG	PE-OP2	1	BYE0571
2	SM-2320B	05/05/15	05/05/15 09:04	RML	MET-1	1	BYE0293
3	EPA-300.0	04/30/15	05/01/15 01:59	OLH	IC2	1	BYE0039
4	EPA-150.1	05/05/15	05/05/15 09:04	RML	MET-1	1	BYE0293
5	EPA-160.1	05/04/15	05/04/15 11:00	CAD	MANUAL	2	BYE0158
6	EPA-353.2	05/01/15	05/01/15 15:50	TDC	KONE-1	1	BYE0242
7	EPA-314.0	05/14/15	05/14/15 16:49	BMW	IC6	1	BYE1312

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510365-03 | **Client Sample Name:** JPL-GW, Dup-8-2Q15, 4/30/2015 8:56:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.54	**J**	2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	**1.0**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/01/15	05/01/15 00:37	BMW	KONE-1	1	BYE0238
2	EPA-200.8	05/07/15	05/09/15 01:52	EAR	PE-EL2	1	BYE0570
3	EPA-200.7	05/07/15	05/08/15 18:39	JRG	PE-OP2	1	BYE0571

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-04 | **Client Sample Name:** JPL-GW, MW-9, 4/30/2015 10:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-04 | **Client Sample Name:** JPL-GW, MW-9, 4/30/2015 10:20:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-04 | **Client Sample Name:** JPL-GW, MW-9, 4/30/2015 10:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	90.0	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.7	%	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	05/04/15	05/04/15 14:10	MGC	MS-V5	1	BYE0160

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510365-04 | **Client Sample Name:** JPL-GW, MW-9, 4/30/2015 10:20:00AM, 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	05/04/15	05/04/15 14:10	MGC	MS-V5	1	BYE0160

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510365-04 | **Client Sample Name:** JPL-GW, MW-9, 4/30/2015 10:20:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**68**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	0.028		1
Total Recoverable Magnesium	**22**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.025		1
Total Recoverable Sodium	**29**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.035		1
Total Recoverable Potassium	**3.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**20**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.43**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**55**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.36**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**340**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/07/15	05/07/15 20:15	JRG	PE-OP2	1	BYE0571
2	SM-2320B	05/05/15	05/05/15 09:27	RML	MET-1	1	BYE0294
3	EPA-300.0	04/30/15	05/01/15 02:16	OLH	IC2	1	BYE0039
4	EPA-150.1	05/05/15	05/05/15 09:27	RML	MET-1	1	BYE0294
5	EPA-160.1	05/04/15	05/04/15 11:00	CAD	MANUAL	2	BYE0158
6	EPA-353.2	05/01/15	05/01/15 15:50	TDC	KONE-1	1	BYE0242
7	EPA-314.0	05/14/15	05/14/15 17:03	BMW	IC6	1	BYE1312

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510365-04 | **Client Sample Name:** JPL-GW, MW-9, 4/30/2015 10:20:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**2.5**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.54	**J**	2
Total Recoverable Iron	**65**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/01/15	05/01/15 00:37	BMW	KONE-1	1	BYE0238
2	EPA-200.8	05/07/15	05/09/15 01:55	EAR	PE-EL2	1	BYE0570
3	EPA-200.7	05/07/15	05/08/15 18:42	JRG	PE-OP2	1	BYE0571

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-05 | **Client Sample Name:** JPL-GW, MW-15, 4/30/2015 11:24:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-05 | **Client Sample Name:** JPL-GW, MW-15, 4/30/2015 11:24:00AM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-05 | **Client Sample Name:** JPL-GW, MW-15, 4/30/2015 11:24:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	85.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.4	%	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	05/04/15	05/04/15 14:32	MGC	MS-V5	1	BYE0160

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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510365-05 | **Client Sample Name:** JPL-GW, MW-15, 4/30/2015 11:24:00AM, 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	05/04/15	05/04/15 14:32	MGC	MS-V5	1	BYE0160

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510365-05 | **Client Sample Name:** JPL-GW, MW-15, 4/30/2015 11:24:00AM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**68**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	0.028		1
Total Recoverable Magnesium	**23**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.025		1
Total Recoverable Sodium	**30**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.035		1
Total Recoverable Potassium	**3.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**270**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**220**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**16**	**mg/L**	**0.50**	**0.061**	**EPA-300.0**	ND		3
Nitrate as N	**0.28**	**mg/L**	**0.10**	**0.018**	**EPA-300.0**	ND		3
Sulfate	**44**	**mg/L**	**1.0**	**0.10**	**EPA-300.0**	ND		3
pH	**7.64**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**330**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	1.3	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/07/15	05/07/15 20:17	JRG	PE-OP2	1	BYE0571
2	SM-2320B	05/05/15	05/05/15 09:40	RLP	MET-1	1	BYE0294
3	EPA-300.0	04/30/15	05/01/15 02:34	OLH	IC2	1	BYE0039
4	EPA-150.1	05/05/15	05/05/15 09:40	RLP	MET-1	1	BYE0294
5	EPA-160.1	05/04/15	05/04/15 11:00	CAD	MANUAL	2	BYE0158
6	EPA-353.2	05/01/15	05/01/15 15:50	TDC	KONE-1	1	BYE0242
7	EPA-314.0	05/14/15	05/14/15 17:17	BMW	IC6	1	BYE1312

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510365-05 | **Client Sample Name:** JPL-GW, MW-15, 4/30/2015 11:24:00AM, 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 Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.54	**J**	2
Total Recoverable Iron	**11**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/01/15	05/01/15 00:37	BMW	KONE-1	1	BYE0238
2	EPA-200.8	05/07/15	05/09/15 01:58	EAR	PE-EL2	1	BYE0570
3	EPA-200.7	05/07/15	05/08/15 18:44	JRG	PE-OP2	1	BYE0571

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-06 | **Client Sample Name:** JPL-GW, MW-6, 4/30/2015 12:41:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.66**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.18**	**ug/L**	**0.50**	**0.11**	**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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.14**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	**0.15**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-06 | **Client Sample Name:** JPL-GW, MW-6, 4/30/2015 12:41:00PM, 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	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.92**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**3.8**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-06 | **Client Sample Name:** JPL-GW, MW-6, 4/30/2015 12:41:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.9	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.5	%	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	05/04/15	05/04/15 12:39	MGC	MS-V5	1	BYE0160

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510365-06 | **Client Sample Name:** JPL-GW, MW-6, 4/30/2015 12:41:00PM, 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	05/04/15	05/04/15 12:39	MGC	MS-V5	1	BYE0160

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510365-06 | **Client Sample Name:** JPL-GW, MW-6, 4/30/2015 12:41:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**140**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	0.028		1
Total Recoverable Magnesium	**48**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.025		1
Total Recoverable Sodium	**49**	**mg/L**	**0.50**	**0.017**	**EPA-200.7**	0.035		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**220**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**130**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND	**A07**	3
Nitrate as N	**13**	**mg/L**	**0.20**	**0.036**	**EPA-300.0**	ND	**A07**	3
Sulfate	**210**	**mg/L**	**2.0**	**0.20**	**EPA-300.0**	ND	**A07**	3
pH	**7.25**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**810**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.9**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/07/15	05/07/15 19:49	JRG	PE-OP2	1	BYE0571
2	SM-2320B	05/05/15	05/05/15 09:47	RLP	MET-1	2	BYE0294
3	EPA-300.0	04/30/15	05/01/15 00:31	BMW	IC2	2	BYE0039
4	EPA-150.1	05/05/15	05/05/15 09:47	RLP	MET-1	1	BYE0294
5	EPA-160.1	05/04/15	05/04/15 11:00	CAD	MANUAL	5	BYE0158
6	EPA-353.2	05/01/15	05/01/15 15:56	TDC	KONE-1	1	BYE0242
7	EPA-314.0	05/14/15	05/14/15 17:31	BMW	IC6	1	BYE1312

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1510365-06 | **Client Sample Name:** JPL-GW, MW-6, 4/30/2015 12:41:00PM, Blaine Tech

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 Arsenic	**0.82**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**820**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	0.54		2
Total Recoverable Iron	**6500**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/01/15	05/01/15 00:37	BMW	KONE-1	1	BYE0238
2	EPA-200.8	05/07/15	05/08/15 23:33	EAR	PE-EL2	1	BYE0570
3	EPA-200.7	05/07/15	05/08/15 18:13	JRG	PE-OP2	1	BYE0571

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-07 | **Client Sample Name:** JPL-GW, MW-16, 4/30/2015 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**1.1**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Bromoform	**1.1**	**ug/L**	**0.50**	**0.27**	**EPA-524.2**	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**1.2**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	**0.74**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	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	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-07 | **Client Sample Name:** JPL-GW, MW-16, 4/30/2015 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	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	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	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	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	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	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1510365-07 | **Client Sample Name:** JPL-GW, MW-16, 4/30/2015 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	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	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	91.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	88.1	%	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	05/04/15	05/04/15 14:55	MGC	MS-V5	1	BYE0160

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1510365-07 | **Client Sample Name:** JPL-GW, MW-16, 4/30/2015 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	05/04/15	05/04/15 14:55	MGC	MS-V5	1	BYE0160

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

BCL Sample ID: 1510365-07 | **Client Sample Name:** JPL-GW, MW-16, 4/30/2015 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,4-Dioxane	ND	ug/L	1.0	0.21	EPA-8270C	ND		1
Naphthalene-d8 (Surrogate)	79.7	%	75 - 132 (LCL - UCL)		EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	05/05/15	05/06/15 15:58	MK1	MS-B7	0.960	BYE0413

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1510365-07 | **Client Sample Name:** JPL-GW, MW-16, 4/30/2015 1:10:00PM, Blaine Tech

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**7.64**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	1
Perchlorate	**2.5**	**ug/L**	**4.0**	**1.3**	**EPA-314.0**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-150.1	05/05/15	05/05/15 09:52	RLP	MET-1	1	BYE0294
2	EPA-314.0	05/14/15	05/14/15 18:54	BMW	IC6	1	BYE1312

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYE0160						
Benzene	BYE0160-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYE0160-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYE0160-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYE0160-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYE0160-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYE0160-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYE0160-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYE0160-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYE0160-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYE0160-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYE0160-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYE0160-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYE0160-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYE0160-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYE0160-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYE0160-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYE0160-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYE0160-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYE0160-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYE0160-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYE0160-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYE0160-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYE0160-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYE0160-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYE0160-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYE0160-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYE0160-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYE0160-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYE0160-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYE0160-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYE0160-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYE0160-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYE0160-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYE0160-BLK1	ND	ug/L	0.50	0.14	

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYE0160						
trans-1,3-Dichloropropene	BYE0160-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYE0160-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYE0160-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYE0160-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYE0160-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYE0160-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BYE0160-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYE0160-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYE0160-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYE0160-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYE0160-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYE0160-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYE0160-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYE0160-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYE0160-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYE0160-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYE0160-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYE0160-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYE0160-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYE0160-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYE0160-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYE0160-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYE0160-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYE0160-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYE0160-BLK1	ND	ug/L	0.50	0.12	
Acetone	BYE0160-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BYE0160-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BYE0160-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BYE0160-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BYE0160-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BYE0160-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BYE0160-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BYE0160-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BYE0160-BLK1	ND	ug/L	4.0	0.97	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYE0160						
Ethyl t-butyl ether	BYE0160-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BYE0160-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BYE0160-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BYE0160-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BYE0160-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BYE0160-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BYE0160-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BYE0160-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BYE0160-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BYE0160-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BYE0160-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BYE0160-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYE0160-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYE0160-BLK1**	**89.2**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYE0160-BLK1**	**101**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYE0160-BLK1**	**93.4**	%	**80 - 120 (LCL - UCL)**		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0160										
Benzene	BYE0160-BS1	LCS	24.340	25.000	ug/L	97.4		70 - 130		
Bromodichloromethane	BYE0160-BS1	LCS	27.900	25.000	ug/L	112		70 - 130		
Chlorobenzene	BYE0160-BS1	LCS	26.000	25.000	ug/L	104		70 - 130		
Chloroethane	BYE0160-BS1	LCS	22.220	25.000	ug/L	88.9		70 - 130		
1,4-Dichlorobenzene	BYE0160-BS1	LCS	26.790	25.000	ug/L	107		70 - 130		
1,1-Dichloroethane	BYE0160-BS1	LCS	22.050	25.000	ug/L	88.2		70 - 130		
1,1-Dichloroethene	BYE0160-BS1	LCS	22.290	25.000	ug/L	89.2		70 - 130		
Toluene	BYE0160-BS1	LCS	23.140	25.000	ug/L	92.6		70 - 130		
Trichloroethene	BYE0160-BS1	LCS	25.790	25.000	ug/L	103		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYE0160-BS1	LCS	9.3600	10.000	ug/L	93.6		75 - 125		
Toluene-d8 (Surrogate)	BYE0160-BS1	LCS	9.6700	10.000	ug/L	96.7		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYE0160-BS1	LCS	11.540	10.000	ug/L	115		80 - 120		

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Tidewater Inc.
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Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0160	Used client sample: Y - Description: MW-6, 04/30/2015 12:41										
Benzene	MS	1510365-06	ND	27.400	25.000	ug/L		110		70 - 130	
	MSD	1510365-06	ND	27.620	25.000	ug/L	0.8	110	20	70 - 130	
Bromodichloromethane	MS	1510365-06	ND	29.380	25.000	ug/L		118		70 - 130	
	MSD	1510365-06	ND	27.730	25.000	ug/L	5.8	111	20	70 - 130	
Chlorobenzene	MS	1510365-06	ND	28.830	25.000	ug/L		115		70 - 130	
	MSD	1510365-06	ND	25.250	25.000	ug/L	13.2	101	20	70 - 130	
Chloroethane	MS	1510365-06	ND	26.730	25.000	ug/L		107		70 - 130	
	MSD	1510365-06	ND	26.680	25.000	ug/L	0.2	107	20	70 - 130	
1,4-Dichlorobenzene	MS	1510365-06	ND	27.750	25.000	ug/L		111		70 - 130	
	MSD	1510365-06	ND	24.020	25.000	ug/L	14.4	96.1	20	70 - 130	
1,1-Dichloroethane	MS	1510365-06	0.18000	26.380	25.000	ug/L		105		70 - 130	
	MSD	1510365-06	0.18000	27.700	25.000	ug/L	4.9	110	20	70 - 130	
1,1-Dichloroethene	MS	1510365-06	ND	25.400	25.000	ug/L		102		70 - 130	
	MSD	1510365-06	ND	26.980	25.000	ug/L	6.0	108	20	70 - 130	
Toluene	MS	1510365-06	ND	29.330	25.000	ug/L		117		70 - 130	
	MSD	1510365-06	ND	26.480	25.000	ug/L	10.2	106	20	70 - 130	
Trichloroethene	MS	1510365-06	3.8000	32.720	25.000	ug/L		116		70 - 130	
	MSD	1510365-06	3.8000	28.980	25.000	ug/L	12.1	101	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1510365-06	ND	9.0000	10.000	ug/L		90.0		75 - 125	
	MSD	1510365-06	ND	10.850	10.000	ug/L	18.6	108		75 - 125	
Toluene-d8 (Surrogate)	MS	1510365-06	ND	10.230	10.000	ug/L		102		80 - 120	
	MSD	1510365-06	ND	10.030	10.000	ug/L	2.0	100		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1510365-06	ND	9.8000	10.000	ug/L		98.0		80 - 120	
	MSD	1510365-06	ND	10.000	10.000	ug/L	2.0	100		80 - 120	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYE0160						
Chloroacetonitrile	BYE0160-BLK1	0	ug/L			
1-Chlorobutane	BYE0160-BLK1	0	ug/L			
1,1-Dichloropropanone	BYE0160-BLK1	0	ug/L			
Methyl acrylate	BYE0160-BLK1	0	ug/L			
Nitrobenzene	BYE0160-BLK1	0	ug/L			
2-Nitropropane	BYE0160-BLK1	0	ug/L			

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Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/21/2015 15:12 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYE0413						
1,4-Dioxane	BYE0413-BLK1	ND	ug/L	1.0	0.21	
Naphthalene-d8 (Surrogate)	**BYE0413-BLK1**	**94.9**	%	**75 - 132 (LCL - UCL)**		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0413										
1,4-Dioxane	BYE0413-BS1	LCS	41.917	50.000	ug/L	83.8		70 - 130		
Naphthalene-d8 (Surrogate)	BYE0413-BS1	LCS	36.670	40.000	ug/L	91.7		75 - 132		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0413	Used client sample: N										
1,4-Dioxane	MS	**1510391-09**	**330.84**	**343.45**	**50.000**	**ug/L**		**25.2**		**70 - 130**	**A01,Q03**
	MSD	**1510391-09**	**330.84**	**384.11**	**50.000**	**ug/L**	**11.2**	**107**	**30**	**70 - 130**	**A01**
Naphthalene-d8 (Surrogate)	MS	1510391-09	ND	30.740	40.000	ug/L		76.8		75 - 132	
	MSD	1510391-09	ND	30.243	40.000	ug/L	1.6	75.6		75 - 132	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYE0039						
Chloride	BYE0039-BLK1	ND	mg/L	0.50	0.061	
Nitrate as N	BYE0039-BLK1	ND	mg/L	0.10	0.018	
Sulfate	BYE0039-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE0158						
Total Dissolved Solids @ 180 C	BYE0158-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYE0242						
Nitrite as N	BYE0242-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BYE0293						
Bicarbonate	BYE0293-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYE0293-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYE0293-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYE0294						
Bicarbonate	BYE0294-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BYE0294-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BYE0294-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYE0571						
Total Recoverable Calcium	**BYE0571-BLK1**	**0.027807**	**mg/L**	**0.10**	**0.014**	**J**
Total Recoverable Magnesium	**BYE0571-BLK1**	**0.025109**	**mg/L**	**0.050**	**0.019**	**J**
Total Recoverable Sodium	**BYE0571-BLK1**	**0.034664**	**mg/L**	**0.50**	**0.017**	**J**
Total Recoverable Potassium	BYE0571-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYE1312						
Perchlorate	BYE1312-BLK1	ND	ug/L	4.0	1.3	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0039										
Chloride	BYE0039-BS1	LCS	53.013	50.000	mg/L	106		90 - 110		
Nitrate as N	BYE0039-BS1	LCS	5.2180	5.0000	mg/L	104		90 - 110		
Sulfate	BYE0039-BS1	LCS	104.40	100.00	mg/L	104		90 - 110		
QC Batch ID: BYE0158										
Total Dissolved Solids @ 180 C	BYE0158-BS1	LCS	550.00	586.00	mg/L	93.9		90 - 110		
QC Batch ID: BYE0242										
Nitrite as N	BYE0242-BS1	LCS	0.50727	0.50000	mg/L	101		90 - 110		
QC Batch ID: BYE0293										
Total Alkalinity as CaCO3	BYE0293-BS3	LCS	103.91	100.00	mg/L	104		90 - 110		
pH	BYE0293-BS2	LCS	7.0400	7.0000	pH Units	101		95 - 105		
QC Batch ID: BYE0294										
Total Alkalinity as CaCO3	BYE0294-BS3	LCS	101.17	100.00	mg/L	101		90 - 110		
pH	BYE0294-BS2	LCS	7.0200	7.0000	pH Units	100		95 - 105		
QC Batch ID: BYE0571										
Total Recoverable Calcium	BYE0571-BS1	LCS	10.373	10.000	mg/L	104		85 - 115		
Total Recoverable Magnesium	BYE0571-BS1	LCS	10.744	10.000	mg/L	107		85 - 115		
Total Recoverable Sodium	BYE0571-BS1	LCS	10.499	10.000	mg/L	105		85 - 115		
Total Recoverable Potassium	BYE0571-BS1	LCS	10.072	10.000	mg/L	101		85 - 115		
QC Batch ID: BYE1312										
Perchlorate	BYE1312-BS1	LCS	9.8059	10.000	ug/L	98.1		85 - 115		

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Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0039	Used client sample: Y - Description: MW-6, 04/30/2015 12:41										
Chloride	DUP	1510365-06	134.90	134.76		mg/L	0.1		10		
	MS	1510365-06	134.90	244.38	101.01	mg/L		108		80 - 120	
	MSD	1510365-06	134.90	244.29	101.01	mg/L	0.0	108	10	80 - 120	
Nitrate as N	DUP	1510365-06	12.884	12.902		mg/L	0.1		10		
	MS	1510365-06	12.884	23.699	10.101	mg/L		107		80 - 120	
	MSD	1510365-06	12.884	23.735	10.101	mg/L	0.2	107	10	80 - 120	
Sulfate	DUP	1510365-06	205.45	205.80		mg/L	0.2		10		
	MS	1510365-06	205.45	428.91	202.02	mg/L		111		80 - 120	
	MSD	1510365-06	205.45	429.45	202.02	mg/L	0.1	111	10	80 - 120	
QC Batch ID: BYE0158	Used client sample: Y - Description: MW-6, 04/30/2015 12:41										
Total Dissolved Solids @ 180 C	DUP	1510365-06	810.00	820.00		mg/L	1.2		10		
QC Batch ID: BYE0242	Used client sample: N										
Nitrite as N	DUP	1510360-01	ND	ND		mg/L			10		
	MS	1510360-01	ND	0.57327	0.52632	mg/L		109		90 - 110	
	MSD	1510360-01	ND	0.57203	0.52632	mg/L	0.2	109	10	90 - 110	
QC Batch ID: BYE0293	Used client sample: N										
Bicarbonate	DUP	1510314-01	164.71	155.45		mg/L	5.8		10		
Carbonate	DUP	1510314-01	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1510314-01	135.09	127.49		mg/L	5.8		10		
pH	DUP	1510314-01	7.4400	7.3500		pH Units	1.2		20		
QC Batch ID: BYE0294	Used client sample: Y - Description: MW-9, 04/30/2015 10:20										
Bicarbonate	DUP	1510365-04	253.76	251.53		mg/L	0.9		10		
Carbonate	DUP	1510365-04	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1510365-04	208.12	206.29		mg/L	0.9		10		
pH	DUP	1510365-04	7.3600	7.4000		pH Units	0.5		20		
QC Batch ID: BYE0571	Used client sample: Y - Description: MW-6, 04/30/2015 12:41										
Total Recoverable Calcium	DUP	**1510365-06**	**137.64**	**140.59**		**mg/L**	**2.1**		**20**		
	MS	**1510365-06**	**137.64**	**143.55**	**10.000**	**mg/L**		**59.0**		**75 - 125**	**A03**
	MSD	**1510365-06**	**137.64**	**149.49**	**10.000**	**mg/L**	**4.1**	**118**	**20**	**75 - 125**	
Total Recoverable Magnesium	DUP	1510365-06	47.666	49.088		mg/L	2.9		20		
	MS	1510365-06	47.666	56.698	10.000	mg/L		90.3		75 - 125	
	MSD	1510365-06	47.666	58.687	10.000	mg/L	3.4	110	20	75 - 125	
Total Recoverable Sodium	DUP	1510365-06	48.947	50.066		mg/L	2.3		20		
	MS	1510365-06	48.947	57.834	10.000	mg/L		88.9		75 - 125	
	MSD	1510365-06	48.947	60.056	10.000	mg/L	3.8	111	20	75 - 125	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0571	Used client sample: Y - Description: MW-6, 04/30/2015 12:41										
Total Recoverable Potassium	DUP	1510365-06	2.8599	2.8512		mg/L	0.3		20		
	MS	1510365-06	2.8599	12.906	10.000	mg/L		100		75 - 125	
	MSD	1510365-06	2.8599	13.370	10.000	mg/L	3.5	105	20	75 - 125	
QC Batch ID: BYE1312	Used client sample: Y - Description: MW-6, 04/30/2015 12:41										
Perchlorate	DUP	1510365-06	2.9442	3.3918		ug/L	14.1		15		J
	MS	1510365-06	2.9442	12.775	10.101	ug/L		97.3		80 - 120	
	MSD	1510365-06	2.9442	13.692	10.101	ug/L	6.9	106	15	80 - 120	

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.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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: BYE0238						
Hexavalent Chromium	BYE0238-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BYE0570						
Total Recoverable Arsenic	BYE0570-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	**BYE0570-BLK1**	**0.54300**	**ug/L**	**3.0**	**0.50**	**J**
Total Recoverable Lead	BYE0570-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYE0571						
Total Recoverable Iron	BYE0571-BLK2	ND	ug/L	50	6.5	

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
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 Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0238										
Hexavalent Chromium	BYE0238-BS1	LCS	0.052438	0.050000	mg/L	105		85 - 115		
QC Batch ID: BYE0570										
Total Recoverable Arsenic	BYE0570-BS1	LCS	100.01	100.00	ug/L	100		85 - 115		
Total Recoverable Chromium	BYE0570-BS1	LCS	43.587	40.000	ug/L	109		85 - 115		
Total Recoverable Lead	BYE0570-BS1	LCS	105.04	100.00	ug/L	105		85 - 115		
QC Batch ID: BYE0571										
Total Recoverable Iron	BYE0571-BS2	LCS	989.44	1000.0	ug/L	98.9		85 - 115		

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Tidewater Inc.
3761 Attucks Drive
Powell, OH 43065

Reported: 05/21/2015 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2nd Qtr. 2015
Project Manager: David Conner

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0238	Used client sample: Y - Description: MW-6, 04/30/2015 12:41										
Hexavalent Chromium	DUP	1510365-06	0.0017040	0.0016580		mg/L	2.7		10		J
	MS	1510365-06	0.0017040	0.053135	0.052632	mg/L		97.7		85 - 115	
	MSD	1510365-06	0.0017040	0.053077	0.052632	mg/L	0.1	97.6	10	85 - 115	
QC Batch ID: BYE0570	Used client sample: Y - Description: MW-6, 04/30/2015 12:41										
Total Recoverable Arsenic	DUP	**1510365-06**	**0.82100**	**1.0470**		**ug/L**	**24.2**		**20**		**J,A02**
	MS	**1510365-06**	**0.82100**	**100.56**	**100.00**	**ug/L**		**99.7**		**70 - 130**	
	MSD	**1510365-06**	**0.82100**	**100.22**	**100.00**	**ug/L**	**0.3**	**99.4**	**20**	**70 - 130**	
Total Recoverable Chromium	DUP	**1510365-06**	**824.07**	**828.48**		**ug/L**	**0.5**		**20**		
	MS	**1510365-06**	**824.07**	**836.80**	**40.000**	**ug/L**		**31.8**		**70 - 130**	**A03**
	MSD	**1510365-06**	**824.07**	**950.56**	**40.000**	**ug/L**	**12.7**	**316**	**20**	**70 - 130**	**A03**
Total Recoverable Lead	DUP	1510365-06	ND	ND		ug/L			20		
	MS	1510365-06	ND	94.208	100.00	ug/L		94.2		70 - 130	
	MSD	1510365-06	ND	95.980	100.00	ug/L	1.9	96.0	20	70 - 130	
QC Batch ID: BYE0571	Used client sample: Y - Description: MW-6, 04/30/2015 12:41										
Total Recoverable Iron	DUP	**1510365-06**	**6509.7**	**5771.6**		**ug/L**	**12.0**		**20**		
	MS	**1510365-06**	**6509.7**	**7237.2**	**1000.0**	**ug/L**		**72.8**		**75 - 125**	**A03**
	MSD	**1510365-06**	**6509.7**	**7884.4**	**1000.0**	**ug/L**	**8.6**	**137**	**20**	**75 - 125**	**A03**

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WECK LABORATORIES, INC.
Analytical Laboratory Service Since 1964

Certificate of Analysis

Report Date: 05/11/15 09:52
Received Date: 05/02/15 10:30
Turnaround Time: Normal

Project: 1510365

Phones: (661) 327-4911
Fax: (661) 327-1918

P.O. #:

Attn: Misty Orton

Client: BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308

Dear Misty Orton :

Enclosed are the results of analyses for samples received 5/2/2015 with the Chain of Custody document. The samples were received in good condition, at 11.4 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab ID: 5E04016-01 **Sample ID: 1510365-07** **Matrix:** Water
Sampled by: Client **Sampled: 04/30/15 13:10**

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
N-Nitrosodiethylamine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 9:13	W5E0175	
N-Nitrosodimethylamine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 9:13	W5E0175	
N-Nitrosodi-n-butylamine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 9:13	W5E0175	
N-Nitrosodi-n-propylamine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 9:13	W5E0175	
N-Nitrosomethylethylamine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 9:13	W5E0175	
N-Nitrosomorpholine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 9:13	W5E0175	
N-Nitrosopiperidine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 9:13	W5E0175	
N-Nitrosopyrrolidine	ND		2.0	ng/l	1	EPA 1625M	5/5/15	5/8/15 9:13	W5E0175	

Weck Laboratories, Inc. 14859 East Clark Avenue City of Industry California 91745-1289 (626) 336-2139 FAX (626) 336-2634
www.weklabs.com

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Certificate of Analysis

Quality Control Section

Nitrosamines by isotopic dilution GC/MS CI Mode - Quality Control

Batch W5E0175 - EPA 1625M

Blank (W5E0175-BLK1) — **Prepared: 05/05/15 Analyzed: 05/07/15 11:59**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		ND		ng/l					
N-Nitrosomethylethylamine		ND		ng/l					
N-Nitrosodiethylamine		ND		ng/l					
N-Nitrosodi-n-propylamine		ND		ng/l					
N-Nitrosomorpholine		ND		ng/l					
N-Nitrosopyrrolidine		ND		ng/l					
N-Nitrosopiperidine		ND		ng/l					
N-Nitrosodi-n-butylamine		ND		ng/l					

LCS (W5E0175-BS1) — **Prepared: 05/05/15 Analyzed: 05/07/15 12:29**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		3.02		ng/l	3.00	101	50-150		
N-Nitrosomethylethylamine		3.36		ng/l	3.00	112	50-150		
N-Nitrosodiethylamine		3.00		ng/l	3.00	100	50-150		
N-Nitrosodi-n-propylamine		2.56		ng/l	3.00	85	50-150		
N-Nitrosomorpholine		3.51		ng/l	3.00	117	50-150		
N-Nitrosopyrrolidine		3.76		ng/l	3.00	125	50-150		
N-Nitrosopiperidine		3.76		ng/l	3.00	125	50-150		
N-Nitrosodi-n-butylamine		2.54		ng/l	3.00	85	50-150		

LCS Dup (W5E0175-BSD1) — **Prepared: 05/05/15 Analyzed: 05/07/15 12:57**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
N-Nitrosodimethylamine		2.98		ng/l	3.00	99	50-150	1	30
N-Nitrosomethylethylamine		3.33		ng/l	3.00	111	50-150	0.9	30
N-Nitrosodiethylamine		3.27		ng/l	3.00	109	50-150	9	30
N-Nitrosodi-n-propylamine		2.70		ng/l	3.00	90	50-150	6	30
N-Nitrosomorpholine		3.44		ng/l	3.00	115	50-150	2	30
N-Nitrosopyrrolidine		3.84		ng/l	3.00	128	50-150	2	30
N-Nitrosopiperidine		3.57		ng/l	3.00	119	50-150	5	30
N-Nitrosodi-n-butylamine		2.56		ng/l	3.00	85	50-150	0.7	30

Weck Laboratories, Inc. 14859 East Clark Avenue City of Industry California 91745-1399 (626) 336-2139 FAX: (626) 336-2634
www.wecklabs.com

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WECK LABORATORIES, INC.
Analytical Laboratory Services Since 1964

Certificate of Analysis

Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Authorized Signature
Contact: Kim G Tu
(Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity
NR	Not Reportable

5E04016 Page 3 of 3

Weck Laboratories, Inc. 14859 East Clark Avenue City of Industry, California 91745-1399 (626) 336-2139 FAX (626) 336-2634
www.wecklabs.com

Tidewater Inc. 3761 Attucks Drive Powell, OH 43065	**Reported:** 05/21/2015 15:12 Project: JPL- GW Monitoring Wells Project Number: 2nd Qtr. 2015 Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A01	Detection and quantitation limits are raised due to sample dilution.
A02	The difference between duplicate readings is less than the quantitation limit.
A03	The sample concentration is more than 4 times the spike level.
A07	Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
Q03	Matrix spike recovery(s) is(are) not within the control limits.
S05	The sample holding time was exceeded.

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ATTACHMENT 3-B: LABORATORY ANALYTICAL REPORTS

This attachment contains the laboratory analytical reports prepared by Eurofins |Eaton Analytical, of Monrovia California.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

ORELAP 4034

AT-1807

Laboratory Report

for

Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109
Attention: David Conner

Date of Issue
05/14/2015

EUROFINS EATON ANALYTICAL

DST: David S Tripp

Project Manager

Report: 531113
Project: TIDEWATER
Group: 2Q15 JPL Triannual
PO#: Sampling

* Accredited in accordance with TNI 2009 and ISO/IEC 17025:2005.
* Laboratory certifies that the test results meet all **TNI 2009 and ISO/IEC 17025:2005** requirements unless noted under the individual analysis.
* Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.
* Test results relate only to the sample(s) tested.

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STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	**Mississippi**	Certified
Alaska	CA00006	**Montana**	Cert 0035
Arizona	AZ0778	**Nebraska**	Certified
Arkansas	Certified	**Nevada**	CA00006-2014-1
California-Monrovia-ELAP	2813	**New Hampshire ***	2959
California-Colton- ELAP	2812	**New Jersey ***	CA 008
California-Folsom- ELAP	2820	**New Mexico**	Certified
Colorado	Certified	**New York ***	11320
Connecticut	PH-0107	**North Carolina**	06701
Delaware	CA 006	**North Dakota**	R-009
Florida *	E871024	**Oregon (Primary AB) ***	**ORELAP 4034**
Georgia	947	**Pennsylvania ***	68-565
Guam	14-003r	**Rhode Island**	LAO00326
Hawaii	Certified	**South Carolina**	87016
Idaho	Certified	**South Dakota**	Certified
Illinois *	200033	**Tennessee**	TN02839
Indiana	C-CA-01	**Texas ***	T104704230-14-7
Kansas *	E-10268	**Utah ***	CA000062014-7
Kentucky	90107	**Vermont**	VT0114
Louisiana *	LA140009	**Virginia ***	460260
Maine	CA0006	**Washington**	C838
Maryland	224	**West Virginia**	9943 C
Commonwealth of Northern Marianas Is.	MP0004	**Wisconsin**	998316660
Massachusetts	M-CA006	**Wyoming**	8TMS-L
Michigan	9906	**EPA Region 5**	Certified
Los Angeles County Sanitation Districts	10264		

* NELAP/TNI Recognized Accreditation Bodies

The tests listed below are accredited and meet the requirements of ISO 17025 as verified by the ANSI-ASQ National Accreditation Board/ACLASS.
Refer to Certificate and scope of accreditation (AT 1807) found at: http://www.eatonanalytical.com

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
1,4-Dioxane	EPA 522	x	x	
2,3,7,8-TCDD	Modified EPA 1613B	x	x	
Acrylamide	In House Method	x	x	
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H (18th)		x	x
Anions and DBPs by IC	EPA 300.0	x	x	x
Anions and DBPs by IC	EPA 300.1	x	x	
Asbestos	EPA 100.2	x		
Bicarbonate Alkalinity as HCO3	SM 2330B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method	x	x	
Carbamates	EPA 531.2	x	x	
Carbonate as CO3	SM 2330B	x	x	x
Carbonyls	EPA 556	x	x	
COD	EPA 410.4 / SM 5220D			x
Chloramines	SM 4500-CL G	x	x	x
Chlorinated Acids	EPA 515.4	x	x	
Chlorinated Acids	EPA 555	x	x	
Chlorine Dioxide	SM 4500-CLO2 D	x	x	
Chlorine -Total/Free/ Combined Residual	SM 4500-Cl G	x	x	x
Conductivity	EPA 120.1			x
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	x	x	
Cyanide, Amenable	SM 4500-CN G	x		x
Cyanide, Free	SM 4500CN F	x	x	x
Cyanide, Total	EPA 335.4	x	x	x
Cyanogen Chloride (screen)	In House Method	x	x	
Diquat and Paraquat	EPA 549.2	x	x	
DBP/HAA	SM 6251B	x	x	
Dissolved Oxygen	SM 4500-O G		x	x
E. Coli	(MTF/EC+MUG)	x		
E. Coli	CFR 141.21(f)(6)(i)		x	x
E. Coli	SM 9223			x
E. Coli (Enumeration)	SM 9221B.1/ SM 9221F	x	x	
E. Coli (Enumeration)	SM 9223B	x	x	
EDB/DCBP	EPA 504.1	x		
EDB/DBCP and DBP	EPA 551.1	x	x	
EDTA and NTA	In House Method	x	x	
Endothall	EPA 548.1	x	x	
Enterococci	SM 9230B	x		x
Fecal Coliform	SM 9221 E (MTF/EC)	x		
Fecal Coliform	SM 9221C, E (MTF/EC)			x
Fecal Coliform (Enumeration)	SM 9221E (MTF/EC)	x	x	
Fecal Coliform with Chlorine Present	SM 9221E			x
Fecal Streptococci	SM 9230B	x		x
Fluoride	SM 4500-F C	x	x	x
Glyphosate	EPA 547	x	x	
Gross Alpha/Beta	EPA 900.0	x	x	x
HAAs/ Dalapon	EPA 552.3	x	x	
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method	x	x	
Heterotrophic Bacteria	SM 9215 B	x	x	
Hexavalent Chromium	EPA 218.6	x	x	x
Hexavalent Chromium	EPA 218.7	x	x	
Hexavalent Chromium	SM 3500-Cr B or C (20th)			x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
Hormones	EPA 539	x	x	
Hydroxide as OH Calc.	SM 2330B	x	x	
Kjeldahl Nitrogen	EPA 351.2			x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA	x	x	
NDMA	EPA 521	x	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x	x
OCL, Pesticides/PCB	EPA 505	x	x	
Ortho Phosphate	EPA 365.1	x	x	
Ortho Phosphate and Total Phosphorous	EPA 365.1/SM 4500-P E			x
Ortho Phosphorous	SM 4500P E	x	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	x	
Perchlorate	EPA 331.0	x	x	
Perchlorate	EPA 314.0	x	x	
Perfluorinated Alkyl Acids	EPA 537	x	x	
pH	EPA 150.1	x		
pH	SM 4500-H+B	x	x	x
Phenylurea Pesticides/ Herbicides	In House Method	x	x	
Pseudomonas	IDEXX Pseudalert	x	x	
Radium-226	RA-226 GA	x	x	
Radium-228	RA-228 GA	x	x	
Radon-222	SM 7500RN	x	x	
Residue, Filterable	SM 2540C	x	x	x
Residue, Non-filterable	SM 2540D			x
Residue, Total	SM 2540B		x	x
Residue, Volatile	EPA 160.4			x
Semi-VOC	EPA 525.2	x	x	
Semi-VOC	EPA 625	x	x	x
Silica	SM 4500-Si D	x	x	x
Silica	SM 4500-SiO2 C	x		x
Sulfide	SM 4500-$S^{=}$ D			x
Sulfite	SM 4500-SO^{3}B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x	x	
Total Coliform	SM 9221 A, B	x	x	
Total Coliform (Enumeration)	SM 9221 A, B, C	x	x	
Total Coliform / E. coli	Colisure	x	x	
Total Coliform	SM 9221B			x
Total Coliform with Chlorine Present	SM 9221B			x
Total Coliform / E.coli	SM 9223	x	x	
TOC	SM 5310C		x	x
TOC/DOC	SM 5310C	x	x	
TOX	SM 5320B			x
Total Phenols	EPA 420.1			x
Total Phenols	EPA 420.4	x	x	x
Total Phosphorous	SM 4500 P F			x
Turbidity	EPA 180.1	x	x	x
Turbidity	SM 2130B	x		x
Uranium by ICP/MS	EPA 200.8	x	x	
UV 254	SM 5910B	x		
VOC	EPA 524.2/EPA 524.3	x	x	
VOC	EPA 624	x	x	x
VOC	EPA SW 846 8260	x	x	
VOC	In House Method	x	x	
Yeast and Mold	SM 9610	x	x	

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Acknowledgement of Samples Received

Addr: **Tidewater, Inc.**
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena91109
Attn: David Conner
Phone: 619-726-7311

Client ID: JPL-CA
Folder #: 531113
Project: TIDEWATER
Sample Group: 2Q15 JPL Triannual Sampling

Project Manager: David S Tripp
Phone: (626) 386-1158
PO #: 1213-000-05

The following samples were received from you on **April 21, 2015** at **1939**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
201504211080	MW-4-2	04/21/2015 0910

@ANIONS48	@8330EDD EMAX	@DIOXANE
@ML521_SPE8	@TCP-524	@VOASDWA
@VOA-TBA	Chlorate by IC	Fluoride
Hexavalent chromium(Dissolved)		

Test Description

@ANIONS48 -- Nitrate, Nitrite by EPA 300.0

@8330EDD EMAX -- @8330EDD Emax

@DIOXANE -- 1,4-Dioxane

@ML521_SPE8 -- Nitrosamines by GCMS

@TCP-524 -- 1,2,3-Trichloropropane (SIM)

@VOASDWA -- Volatile Organics by GCMS

@VOA-TBA -- TBA by EPA 524.2 Modified

750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (626) 386-1101 http://www.EatonAnalytical.com

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Eaton Analytical

CHAIN OF CUSTODY RECORD

531113
~~531070~~

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: #352A

SAMPLES CHECKED AGAINST COC BY: VP

SAMPLES LOGGED IN BY: VP

SAMPLES REC'D DAY OF COLLECTION? [X] (check for yes)

SAMPLE TEMP RECEIVED AT:

[ ] Colton / No. California / Arizona ____ °C (Compliance: 4 ± 2 °C)

[X] Monrovia 5.8 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen ____ Partially Frozen ____ Thawed ____ Wet Ice X No Ice ____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: ____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: JPL-CA

PROJECT CODE: Tidewater bottle order

EEA CLIENT CODE:

COC ID:

SAMPLE GROUP: Blaine Tech

TAT requested: rush by adv notice only STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

(check for yes) **COMPLIANCE SAMPLES** [ ]
- Requires state forms [ ]

(check for yes) **NON-COMPLIANCE SAMPLES** [ ]
REGULATION INVOLVED: ____

Type of samples (circle one): **ROUTINE SPECIAL CONFIRMATION** (eg. SDWA, Phase V, NPDES, FDA,...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES [X] (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	SAMPLER COMMENTS
4-21-15	0910	MW-4-2		RGW			
		APR 2 1 2015	1939				
		Victor Plascencia					
		Eurofins Eaton Analytical					

*** MATRIX TYPES:** **RSW** = Raw Surface Water **CFW** = Chlor(am)inated Finished Water **SEAW** = Sea Water **BW** = Bottled Water **SO** = Soil **O** = Other - Please Identify
RGW = Raw Ground Water **FW** = Other Finished Water **WW** = Waste Water **SW** = Storm Water **SL** = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	Andy Wolff	Andy Wolff	BTS / Area Supervisor	4-21-15	0910
RELINQUISHED BY:	Andy Wolff	" "	" "	4-21-15	1600
RECEIVED BY:	Nicole	Nicole	Blaine Tech Services	4/21/15	1600
RELINQUISHED BY:	Alex Marquez	Alex Marquez	ECI	4/21/15	
RECEIVED BY:	James Paxton	James Paxton	EUR	4-21-15	4:50
	James Paxton	James Paxton	EUR	4-21-15	

QA FO 0029 (06/26/2013)

PAGE 1 OF 1

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formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
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(626) 386-1100 FAX (626) 386-1101

Kit Order for Jet Propulsion Laboratory

David S Tripp is your Eurofins Eaton Analytical Project Manager

Note: Sampler Please return this paper with your samples

Kit #: 110244
Created By: ADT
Deliver By: 04/10/2015
STG: Bottle Orders
Ice Type: W

Client ID: JPL-CA
Project Code: TIDEWATER Bottle Orders
Group Name: 2Q15 JPL Triannual Sampling
PO#/JOB#: 1213-000-05

Ship Sample Kits to
Jet Propulsion Laboratory
20735 Belshaw Avenue
Carson, CA 90746

Attn: Robert Sunjara
Phone: 310-885-4455 x 115

Send Report to
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

Billing Address
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

# of Sample	Tests	Bottles - Qty for each sample, type & preservative if ai	UN DOT #
7	@8330EDD EMAX	2 1L amber glass 1ml thio (8%)	
7	@ANIONS48, Fluoride	1 125ml poly no preservative	
7	@DIOXANE	3 125ml amber glass 6.25 Sulfite +125 mg Bisulfite	
7	@ML521_SPE8	3 500ml amber glass 40-50 mg Na Thiosulfate	
7	@VOASDWA	3 40ml amber glass vial 4drops 6N HCL (36%)	UN1789
7	@VOA-TBA	4 40ml amber glass vial TBA_4 drops 1:1 HCL	UN1789
7	Chlorate by IC	1 60mL poly 0.6mL 1% EDA solution	
7	Hexavalent Chromium (Dissolved)	1 125ml poly 1.25 ml NH4SO4/NH4OH buffer	

Comments

One set per cooler

Code Status Date Shipped Via Tracking #

750 Royal Oaks Drive, Suite 100
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1 800 566 LABS (1 800 566 5227)

Laboratory Hits
Report: 531113

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/21/2015 1939

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201504211080	**MW-4-2**				
05/02/2015 17:37	Chlorate by IC		570		ug/L	20
04/27/2015 21:30	Fluoride		0.33	4	mg/L	0.05
04/23/2015 18:42	Hexavalent chromium(Dissolved)		0.083		ug/L	0.02
04/22/2015 16:35	Nitrate as Nitrogen by IC		12	10	mg/L	0.5
04/22/2015 16:35	Nitrate as NO3 (calc)		53	45	mg/L	2.2
05/04/2015 22:53	N-Nitrosomorpholine		2.2		ng/l	2
04/23/2015 9:27	Trichloroethylene (TCE)		1.2	5	ug/L	0.5

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data
Report: 531113

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/21/2015 1939

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
MW-4-2 (201504211080)						**Sampled on 04/21/2015 0910**		
		EPA 522 - 1,4-Dioxane						
4/27/2015	04/28/2015 22:28	835464	(EPA 522)	1,4-Dioxane	ND	ug/L	1	1
4/27/2015	04/28/2015 22:28	835464	(EPA 522)	Dioxane-d8	100	%		1
		EPA 521 - Nitrosamines by GCMS						
4/23/2015	05/04/2015 22:53	836628	(EPA 521)	N-Nitrosodibutylamine (NDBA)	ND	ng/L	2	1
4/23/2015	05/04/2015 22:53	836628	(EPA 521)	N-Nitrosodiethylamine (NDEA)	ND	ng/L	2	1
4/23/2015	05/04/2015 22:53	836628	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
4/23/2015	05/04/2015 22:53	836628	(EPA 521)	N-Nitrosodi-n-propylamine (NDPA)	ND	ng/L	2	1
4/23/2015	05/04/2015 22:53	836628	(EPA 521)	N-Nitrosomethylethylamine (NMEA)	ND	ng/L	2	1
4/23/2015	05/04/2015 22:53	836628	(EPA 521)	N-Nitrosomorpholine	2.2	ng/l	2	1
4/23/2015	05/04/2015 22:53	836628	(EPA 521)	N-Nitrosopiperidine (NPIP)	ND	ng/L	2	1
4/23/2015	05/04/2015 22:53	836628	(EPA 521)	N-Nitrosopyrollidine (NPYR)	ND	ng/L	2	1
4/23/2015	05/04/2015 22:53	836628	(EPA 521)	NDMA-D6	95	%		1
		EPA 218.6 - Hexavalent chromium(Dissolved)						
	04/23/2015 18:42	834678	(EPA 218.6)	Hexavalent chromium(Dissolved)	0.083	ug/L	0.02	1
		EPA 300.0 - Nitrate, Nitrite by EPA 300.0						
	04/22/2015 16:35	834374	(EPA 300.0)	Nitrate as Nitrogen by IC	12	mg/L	0.5	5
	04/22/2015 16:35	834374	(EPA 300.0)	Nitrate as NO3 (calc)	53	mg/L	2.2	5
		EPA 300.0 - Disinfection ByProducts by 300.0						
	05/02/2015 17:37	836412	(EPA 300.0)	Chlorate by IC	570	ug/L	20	1
		EPA 8330 - @8330EDD Emax						
	04/29/2015 19:08		(EPA 8330)	1,3,5-TNB	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	1,3-DNB	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	2,4,6-TNT	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	2,4-DNT	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	2,6-DNT	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	2-AM-4,6DNT	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	2-Nitrotoluene	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	3-Nitrotoluene	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	4-AM-2,6-DNT	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	4-Nitrotoluene	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	HMX	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	Nitrobenzene	ND	ug/L	0.4	1
	04/29/2015 19:08		(EPA 8330)	RDX	ND	ug/L	0.4	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data
Report: 531113

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/21/2015 1939

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	04/29/2015	19:08		(EPA 8330)	Tetryl	ND	ug/L	0.4	1
	04/29/2015	19:08		(EPA 8330)	3,4-Dinitrotoluene	93	%		1
		EPA 524.2 - Volatile Organics by GCMS							
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Benzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Bromobenzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Bromoethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Bromoform	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Chloroethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Chloroform (Trichloromethane)	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
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Pasadena, 91109

Samples Received on:
04/21/2015 1939

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Dibromomethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Dichloromethane	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Naphthalene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	o-Xylene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Styrene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Toluene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Total THM	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Total xylenes	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Trichloroethylene (TCE)	1.2	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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04/21/2015 1939

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.5	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.3	1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	1,2-Dichloroethane-d4	112	%		1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	4-Bromofluorobenzene	106	%		1
4/22/2015	04/23/2015	9:27	834475	(EPA 524.2)	Toluene-d8	96	%		1
		CASRL 524M-TCP - 1,2,3-Trichloropropane (SIM)							
4/22/2015	04/22/2015	19:59	834466	(CASRL 524M-TCP)	1,2,3-Trichloropropane	ND	ug/L	0.005	1
4/22/2015	04/22/2015	19:59	834466	(CASRL 524M-TCP)	Toluene-d8	95	%		1
		EPA 524.2 SIM - TBA by EPA 524.2 Modified							
4/23/2015	04/23/2015	19:25	834699	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2	1
4/23/2015	04/23/2015	19:25	834699	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	106	%		1
4/23/2015	04/23/2015	19:25	834699	(EPA 524.2 SIM)	4-Bromofluorobenzene	86	%		1
4/23/2015	04/23/2015	19:25	834699	(EPA 524.2 SIM)	Toluene-d8	96	%		1
		SM 4500F-C - Fluoride							
	04/27/2015	21:30	835109	(SM 4500F-C)	Fluoride	0.33	mg/L	0.05	1

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Report: 531113

Tidewater, Inc.
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Folder Comments

Analytical results for 8330 are submitted by Emax Laboratories, Inc. Torrance, CA CA
NELAC 02116CA

The Comments Report may be blank if there are no comments for this report.

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Tidewater, Inc.

QC Ref # 834374 - Nitrate, Nitrite by EPA 300.0 — **Analysis Date: 04/22/2015**
201504211080 MW-4-2 — Analyzed by: CYP

QC Ref # 834466 - 1,2,3-Trichloropropane (SIM) — **Analysis Date: 04/22/2015**
201504211080 MW-4-2 — Analyzed by: KAM

QC Ref # 834475 - Volatile Organics by GCMS — **Analysis Date: 04/23/2015**
201504211080 MW-4-2 — Analyzed by: KAM

QC Ref # 834678 - Hexavalent chromium(Dissolved) — **Analysis Date: 04/23/2015**
201504211080 MW-4-2 — Analyzed by: TLH

QC Ref # 834699 - TBA by EPA 524.2 Modified — **Analysis Date: 04/23/2015**
201504211080 MW-4-2 — Analyzed by: KCP

QC Ref # 835109 - Fluoride — **Analysis Date: 04/27/2015**
201504211080 MW-4-2 — Analyzed by: MIA8

QC Ref # 835464 - 1,4-Dioxane — **Analysis Date: 04/28/2015**
201504211080 MW-4-2 — Analyzed by: JYH

QC Ref # 836412 - Disinfection ByProducts by 300.0 — **Analysis Date: 05/02/2015**
201504211080 MW-4-2 — Analyzed by: NJR

QC Ref # 836628 - Nitrosamines by GCMS — **Analysis Date: 05/04/2015**
201504211080 MW-4-2 — Analyzed by: PAC

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 834374 - Nitrate, Nitrite by EPA 300.0 by EPA 300.0						**Analysis Date: 04/22/2015**			
LCS1	Nitrate as Nitrogen by IC		2.5	2.49	mg/L	100	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.49	mg/L	100	(90-110)	20	0.0
MBLK	Nitrate as Nitrogen by IC			<0.10	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0479	mg/L	96	(50-150)		
MS_201504211080	Nitrate as Nitrogen by IC	12	6.5	18.3	mg/L	102	(80-120)		
MSD_201504211080	Nitrate as Nitrogen by IC	12	6.5	18.3	mg/L	103	(80-120)	20	0.0
QC Ref# 834466 - 1,2,3-Trichloropropane (SIM) by CASRL 524M-TCP						**Analysis Date: 04/22/2015**			
DUP_201504200101	1,2,3-Trichloropropane	0.150	0.025	0.158	ug/L		(0-20)	20	5.2
DUP_201504200100	1,2,3-Trichloropropane	0.179	0.025	0.165	ug/L		(0-20)	20	8.2
LCS1	1,2,3-Trichloropropane		0.01	0.00949	ug/L	95	(80-120)		
LCS2	1,2,3-Trichloropropane		0.01	0.00988	ug/L	99	(80-120)	20	4.0
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.005	0.00523	ug/L	105	(50-150)		
DUP_201504200101	Toluene-d8 (S)		650	99.8	%	100	(70-130)		
DUP_201504200100	Toluene-d8 (S)		650	94.2	%	94	(70-130)		
LCS1	Toluene-d8 (S)		130	102	%	102	(70-130)		
LCS2	Toluene-d8 (S)		130	100	%	100	(70-130)		
MBLK	Toluene-d8 (S)			105	%	105	(70-130)		
MBLK	Toluene-d8 (S)			100	%	100	(70-130)		
MRL_CHK	Toluene-d8 (S)		130	101	%	101	(70-130)		
QC Ref# 834475 - Volatile Organics by GCMS by EPA 524.2						**Analysis Date: 04/23/2015**			
LCS1	1,1,1,2-Tetrachloroethane		5	5.04	ug/L	101	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	4.88	ug/L	98	(70-130)	20	3.2
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
LCS1	1,1,1-Trichloroethane		5	5.05	ug/L	101	(70-130)		
LCS2	1,1,1-Trichloroethane		5	5.08	ug/L	102	(70-130)	20	0.59
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
LCS1	1,1,2,2-Tetrachloroethane		5	5.22	ug/L	104	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	5.08	ug/L	102	(70-130)	20	2.7
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
LCS1	1,1,2-Trichloroethane		5	5.04	ug/L	101	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.96	ug/L	99	(70-130)	20	1.6
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
LCS1	1,1-Dichloroethane		5	4.90	ug/L	98	(70-130)		
LCS2	1,1-Dichloroethane		5	4.89	ug/L	98	(70-130)	20	0.20

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	1,1-Dichloroethane			<0.5	ug/L				
LCS1	1,1-Dichloroethylene		5	5.01	ug/L	100	(70-130)		
LCS2	1,1-Dichloroethylene		5	5.07	ug/L	101	(70-130)	20	1.2
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
LCS1	1,1-Dichloropropene		5	4.93	ug/L	99	(70-130)		
LCS2	1,1-Dichloropropene		5	4.79	ug/L	96	(70-130)	20	2.9
MBLK	1,1-Dichloropropene			<0.5	ug/L				
LCS1	1,2,3-Trichlorobenzene		5	5.26	ug/L	105	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	5.45	ug/L	109	(70-130)	20	3.5
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
LCS1	1,2,3-Trichloropropane		5	5.18	ug/L	104	(70-130)		
LCS2	1,2,3-Trichloropropane		5	5.11	ug/L	102	(70-130)	20	1.4
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
LCS1	1,2,4-Trichlorobenzene		5	4.97	ug/L	99	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	5.07	ug/L	101	(70-130)	20	2.0
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
LCS1	1,2,4-Trimethylbenzene		5	5.39	ug/L	108	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	5.34	ug/L	107	(70-130)	20	0.93
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
LCS1	1,2-Dichloroethane		5	5.08	ug/L	102	(70-130)		
LCS2	1,2-Dichloroethane		5	4.94	ug/L	99	(70-130)	20	2.8
MBLK	1,2-Dichloroethane			<0.5	ug/L				
LCS1	1,2-Dichloroethane-d4 (S)			102	%	102	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			98.4	%	98	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
LCS1	1,2-Dichloropropane		5	4.87	ug/L	97	(70-130)		
LCS2	1,2-Dichloropropane		5	4.80	ug/L	96	(70-130)	20	1.5
MBLK	1,2-Dichloropropane			<0.5	ug/L				
LCS1	1,3,5-Trimethylbenzene		5	5.38	ug/L	108	(70-130)		
LCS2	1,3,5-Trimethylbenzene		5	5.31	ug/L	106	(70-130)	20	1.3
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
LCS1	1,3-Dichloropropane		5	5.04	ug/L	101	(70-130)		
LCS2	1,3-Dichloropropane		5	5.11	ug/L	102	(70-130)	20	1.4
MBLK	1,3-Dichloropropane			<0.5	ug/L				
LCS1	2,2-Dichloropropane		5	4.32	ug/L	86	(70-130)		
LCS2	2,2-Dichloropropane		5	4.60	ug/L	92	(70-130)	20	6.3
MBLK	2,2-Dichloropropane			<0.5	ug/L				
LCS1	2-Butanone (MEK)		50	47.3	ug/L	95	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	2-Butanone (MEK)		50	45.5	ug/L	91	(70-130)	20	3.9
MBLK	2-Butanone (MEK)			<5.0	ug/L				
LCS1	4-Bromofluorobenzene (S)			101	%	101	(70-130)		
LCS2	4-Bromofluorobenzene (S)			104	%	104	(70-130)		
MBLK	4-Bromofluorobenzene (S)			103	%	103	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	54.3	ug/L	109	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	51.1	ug/L	102	(70-130)	20	6.1
MBLK	4-Methyl-2-Pentanone (MIBK)			<5	ug/L				
LCS1	Benzene		5	4.96	ug/L	99	(70-130)		
LCS2	Benzene		5	4.94	ug/L	99	(70-130)	20	0.40
MBLK	Benzene			<0.5	ug/L				
LCS1	Bromobenzene		5	5.06	ug/L	101	(70-130)		
LCS2	Bromobenzene		5	4.99	ug/L	100	(70-130)	20	1.4
MBLK	Bromobenzene			<0.5	ug/L				
LCS1	Bromochloromethane		5	5.10	ug/L	102	(70-130)		
LCS2	Bromochloromethane		5	4.97	ug/L	99	(70-130)	20	2.6
MBLK	Bromochloromethane			<0.5	ug/L				
LCS1	Bromodichloromethane		5	4.75	ug/L	95	(70-130)		
LCS2	Bromodichloromethane		5	4.73	ug/L	95	(70-130)	20	0.42
MBLK	Bromodichloromethane			<0.5	ug/L				
LCS1	Bromoethane		5	5.02	ug/L	100	(70-130)		
LCS2	Bromoethane		5	4.82	ug/L	96	(70-130)	20	4.1
MBLK	Bromoethane			<0.5	ug/L				
LCS1	Bromoform		5	4.89	ug/L	98	(70-130)		
LCS2	Bromoform		5	4.66	ug/L	93	(70-130)	20	4.8
MBLK	Bromoform			<0.5	ug/L				
LCS1	Bromomethane (Methyl Bromide)		5	5.21	ug/L	104	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	5.27	ug/L	105	(70-130)	20	1.1
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
LCS1	Carbon disulfide		5	4.68	ug/L	94	(70-130)		
LCS2	Carbon disulfide		5	4.65	ug/L	93	(70-130)	20	0.64
MBLK	Carbon disulfide			<0.5	ug/L				
LCS1	Carbon Tetrachloride		5	5.05	ug/L	101	(70-130)		
LCS2	Carbon Tetrachloride		5	4.97	ug/L	99	(70-130)	20	1.6
MBLK	Carbon Tetrachloride			<0.5	ug/L				
LCS1	Chlorobenzene		5	5.04	ug/L	101	(70-130)		
LCS2	Chlorobenzene		5	5.00	ug/L	100	(70-130)	20	0.80
MBLK	Chlorobenzene			<0.5	ug/L				

Spike recovery is already corrected for native results.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Chlorodibromomethane		5	4.82	ug/L	96	(70-130)		
LCS2	Chlorodibromomethane		5	4.77	ug/L	95	(70-130)	20	1.0
MBLK	Chlorodibromomethane			<0.5	ug/L				
LCS1	Chloroethane		5	5.42	ug/L	108	(70-130)		
LCS2	Chloroethane		5	5.33	ug/L	107	(70-130)	20	1.7
MBLK	Chloroethane			<0.5	ug/L				
LCS1	Chloroform (Trichloromethane)		5	4.88	ug/L	98	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.78	ug/L	96	(70-130)	20	2.1
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
LCS1	Chloromethane(Methyl Chloride)		5	5.09	ug/L	102	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	5.08	ug/L	102	(70-130)	20	0.20
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
LCS1	cis-1,2-Dichloroethylene		5	5.07	ug/L	101	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	4.99	ug/L	100	(70-130)	20	1.6
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
LCS1	cis-1,3-Dichloropropene		5	4.65	ug/L	93	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	4.67	ug/L	93	(70-130)	20	0.43
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
LCS1	Dibromomethane		5	5.04	ug/L	101	(70-130)		
LCS2	Dibromomethane		5	5.15	ug/L	103	(70-130)	20	2.2
MBLK	Dibromomethane			<0.5	ug/L				
LCS1	Dichlorodifluoromethane		5	5.07	ug/L	101	(70-130)		
LCS2	Dichlorodifluoromethane		5	5.04	ug/L	101	(70-130)	20	0.59
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
LCS1	Dichloromethane		5	5.12	ug/L	102	(70-130)		
LCS2	Dichloromethane		5	4.98	ug/L	100	(70-130)	20	2.8
MBLK	Dichloromethane			<0.5	ug/L				
LCS1	Di-isopropyl ether		5	4.84	ug/L	97	(70-130)		
LCS2	Di-isopropyl ether		5	4.64	ug/L	93	(70-130)	20	4.2
MBLK	Di-isopropyl ether			<3.0	ug/L				
LCS1	Ethyl benzene		5	5.13	ug/L	103	(70-130)		
LCS2	Ethyl benzene		5	5.12	ug/L	102	(70-130)	20	0.20
MBLK	Ethyl benzene			<0.5	ug/L				
LCS1	Hexachlorobutadiene		5	4.85	ug/L	97	(70-130)		
LCS2	Hexachlorobutadiene		5	4.93	ug/L	99	(70-130)	20	1.6
MBLK	Hexachlorobutadiene			<0.5	ug/L				
LCS1	Isopropylbenzene		5	5.25	ug/L	105	(70-130)		
LCS2	Isopropylbenzene		5	5.22	ug/L	104	(70-130)	20	0.57

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Isopropylbenzene			<0.5	ug/L				
LCS1	m,p-Xylenes		10	10.6	ug/L	106	(70-130)		
LCS2	m,p-Xylenes		10	10.5	ug/L	105	(70-130)	20	0.95
MBLK	m,p-Xylenes			<0.5	ug/L				
LCS1	m-Dichlorobenzene (1,3-DCB)		5	5.27	ug/L	105	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	5.12	ug/L	102	(70-130)	20	2.9
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
LCS1	Methyl Tert-butyl ether (MTBE)		5	4.82	ug/L	96	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.73	ug/L	95	(70-130)	20	1.9
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
LCS1	Naphthalene		5	4.92	ug/L	98	(70-130)		
LCS2	Naphthalene		5	4.96	ug/L	99	(70-130)	20	0.81
MBLK	Naphthalene			<0.5	ug/L				
LCS1	n-Butylbenzene		5	4.98	ug/L	100	(70-130)		
LCS2	n-Butylbenzene		5	4.97	ug/L	99	(70-130)	20	0.20
MBLK	n-Butylbenzene			<0.5	ug/L				
LCS1	n-Propylbenzene		5	5.31	ug/L	106	(70-130)		
LCS2	n-Propylbenzene		5	5.14	ug/L	103	(70-130)	20	3.3
MBLK	n-Propylbenzene			<0.5	ug/L				
LCS1	o-Chlorotoluene		5	5.40	ug/L	108	(70-130)		
LCS2	o-Chlorotoluene		5	5.39	ug/L	108	(70-130)	20	0.19
MBLK	o-Chlorotoluene			<0.5	ug/L				
LCS1	o-Dichlorobenzene (1,2-DCB)		5	5.00	ug/L	100	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	5.05	ug/L	101	(70-130)	20	1
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
LCS1	o-Xylene		5	5.08	ug/L	102	(70-130)		
LCS2	o-Xylene		5	4.96	ug/L	99	(70-130)	20	2.4
MBLK	o-Xylene			<0.5	ug/L				
LCS1	p-Chlorotoluene		5	5.41	ug/L	108	(70-130)		
LCS2	p-Chlorotoluene		5	5.22	ug/L	104	(70-130)	20	3.6
MBLK	p-Chlorotoluene			<0.5	ug/L				
LCS1	p-Dichlorobenzene (1,4-DCB)		5	5.25	ug/L	105	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	5.23	ug/L	105	(70-130)	20	0.38
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
LCS1	p-Isopropyltoluene		5	5.34	ug/L	107	(70-130)		
LCS2	p-Isopropyltoluene		5	5.34	ug/L	107	(70-130)	20	0.0
MBLK	p-Isopropyltoluene			<0.5	ug/L				
LCS1	sec-Butylbenzene		5	5.32	ug/L	106	(70-130)		

Spike recovery is already corrected for native results.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory QC
Report: 531113

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	sec-Butylbenzene		5	5.25	ug/L	105	(70-130)	20	1.3
MBLK	sec-Butylbenzene			<0.5	ug/L				
LCS1	Styrene		5	5.17	ug/L	103	(70-130)		
LCS2	Styrene		5	5.03	ug/L	101	(70-130)	20	2.8
MBLK	Styrene			<0.5	ug/L				
LCS1	tert-amyl Methyl Ether		5	4.93	ug/L	99	(70-130)		
LCS2	tert-amyl Methyl Ether		5	5.03	ug/L	101	(70-130)	20	2.0
MBLK	tert-amyl Methyl Ether			<3	ug/L				
LCS1	tert-Butyl Ethyl Ether		5	4.93	ug/L	99	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	5.03	ug/L	101	(70-130)	20	2.0
MBLK	tert-Butyl Ethyl Ether			<3	ug/L				
LCS1	tert-Butylbenzene		5	5.32	ug/L	106	(70-130)		
LCS2	tert-Butylbenzene		5	5.20	ug/L	104	(70-130)	20	2.3
MBLK	tert-Butylbenzene			<0.5	ug/L				
LCS1	Tetrachloroethylene (PCE)		5	4.88	ug/L	98	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.91	ug/L	98	(70-130)	20	0.61
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
LCS1	Toluene		5	4.92	ug/L	98	(70-130)		
LCS2	Toluene		5	4.79	ug/L	96	(70-130)	20	2.7
MBLK	Toluene			<0.5	ug/L				
LCS1	Toluene-d8 (S)			102	%	102	(70-130)		
LCS2	Toluene-d8 (S)			101	%	101	(70-130)		
MBLK	Toluene-d8 (S)			92.4	%	92	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.92	ug/L	98	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	5.04	ug/L	101	(70-130)	20	2.4
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
LCS1	trans-1,3-Dichloropropene		5	4.63	ug/L	93	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	4.66	ug/L	93	(70-130)	20	0.65
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
LCS1	Trichloroethylene (TCE)		5	4.90	ug/L	98	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.81	ug/L	96	(70-130)	20	1.9
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
LCS1	Trichlorofluoromethane		5	5.05	ug/L	101	(70-130)		
LCS2	Trichlorofluoromethane		5	5.05	ug/L	101	(70-130)	20	0.0
MBLK	Trichlorofluoromethane			<0.5	ug/L				
LCS1	Trichlorotrifluoroethane(Freon		5	4.98	ug/L	100	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon		5	5.12	ug/L	102	(70-130)	20	2.8
MBLK	Trichlorotrifluoroethane(Freon			<0.5	ug/L				

Spike recovery is already corrected for native results.
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RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531113

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Vinyl chloride (VC)		5	5.05	ug/L	101	(70-130)		
LCS2	Vinyl chloride (VC)		5	4.92	ug/L	98	(70-130)	20	2.6
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
QC Ref# 834678 - Hexavalent chromium(Dissolved) by EPA 218.6						**Analysis Date: 04/23/2015**			
LCS1	Hexavalent chromium(Dissolved)		2	2.00	ug/L	100	(90-110)		
LCS2	Hexavalent chromium(Dissolved)		2	1.98	ug/L	99	(90-110)		
MBLK	Hexavalent chromium(Dissolved)			<0.020	ug/L				
MRL_CHK	Hexavalent chromium(Dissolved)		0.02	0.0196	ug/L	98	(50-150)		
MS_201501190028	Hexavalent chromium(Dissolved)	1.5	2	3.64	ug/L	105	(90-110)		
MS_201504211091	Hexavalent chromium(Dissolved)	0.18	2	2.24	ug/L	103	(90-110)		
MSD_201501190028	Hexavalent chromium(Dissolved)	1.5	2	3.54	ug/L	100	(90-110)	20	2.8
MSD_201504211091	Hexavalent chromium(Dissolved)	0.18	2	2.24	ug/L	103	(90-110)	20	0.0
QC Ref# 834699 - TBA by EPA 524.2 Modified by EPA 524.2 SIM						**Analysis Date: 04/23/2015**			
LCS1	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			108	%	108	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
LCS1	4-Bromofluorobenzene (S)			86.0	%	86	(70-130)		
LCS2	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MBLK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			90.0	%	90	(70-130)		
LCS1	t-Butyl Alcohol		5	4.03	ug/L	81	(70-130)		
LCS2	t-Butyl Alcohol		5	4.31	ug/L	86	(70-130)	20	6.7
MBLK	t-Butyl Alcohol			<1	ug/L				
MRL_CHK	t-Butyl Alcohol		2	1.98	ug/L	99	(50-150)		
LCS1	Toluene-d8 (S)			96.0	%	96	(70-130)		
LCS2	Toluene-d8 (S)			96.0	%	96	(70-130)		
MBLK	Toluene-d8 (S)			94.0	%	94	(70-130)		
MRL_CHK	Toluene-d8 (S)			96.0	%	96	(70-130)		
QC Ref# 835109 - Fluoride by SM 4500F-C						**Analysis Date: 04/27/2015**			
LCS1	Fluoride		1	1.05	mg/L	105	(81-116)		
LCS2	Fluoride		1	1.06	mg/L	106	(81-116)	20	0.95
MBLK	Fluoride			<0.05	mg/L				
MRL_CHK	Fluoride		0.05	0.0513	mg/L	103	(50-150)		
MS_201504210193	Fluoride	ND	1	1.03	mg/L	103	(80-120)		
MS_201504211069	Fluoride	0.43	1	1.44	mg/L	100	(80-120)		
MSD_201504210193	Fluoride	ND	1	1.05	mg/L	105	(80-120)	20	1.9

Spike recovery is already corrected for native results.
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RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531113

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MSD_201504211069	Fluoride	0.43	1	1.46	mg/L	103	(80-120)	20	1.4
QC Ref# 835464 - 1,4-Dioxane by EPA 522						**Analysis Date: 04/28/2015**			
LCS1	Dioxane		20	22.1	ug/L	110	(70-130)		
MBLK	Dioxane			<1	ug/L				
MRLLW	Dioxane		0.07	0.0650	ug/L	93	(50-150)		
MS_201504240022	Dioxane	ND	20	20.9	ug/L	105	(70-130)		
MSD_201504240022	Dioxane	ND	20	19.2	ug/L	96	(30-130)	20	8.5
LCS1	Dioxane-d8 (S)			109	%	109	(70-130)		
MBLK	Dioxane-d8 (S)			97.1	%	97	(70-130)		
MRLLW	Dioxane-d8 (S)			99.8	%	100	(70-130)		
MS_201504240022	Dioxane-d8 (S)			102	%	102	(70-130)		
MSD_201504240022	Dioxane-d8 (S)			96.8	%	97	(70-130)		
QC Ref# 836412 - Disinfection ByProducts by 300.0 by EPA 300.0						**Analysis Date: 05/02/2015**			
LCS1	Chlorate by IC		200	196	ug/L	98	(90-110)		
LCS2	Chlorate by IC		200	195	ug/L	98	(90-110)	20	0.51
MBLK	Chlorate by IC			<10	ug/L				
MRLHI	Chlorate by IC		20	19.0	ug/L	95	(50-150)		
MS_201504290692	Chlorate by IC	ND	100	97.1	ug/L	97	(80-120)		
MS_201504290552	Chlorate by IC	ND	100	98.3	ug/L	98	(80-120)		
MSD_201504290552	Chlorate by IC	ND	100	99.9	ug/L	100	(80-120)	15	1.6
MSD_201504290692	Chlorate by IC	ND	100	97.9	ug/L	98	(80-120)	15	0.82
QC Ref# 836628 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 05/04/2015**			
LCS3	NDMA-D6 (S)		20	106	%	106	(70-130)		
MBLK	NDMA-D6 (S)			115	%	115	(70-130)		
MRL_CHK	NDMA-D6 (S)		20	98.2	%	98	(70-130)		
MS2_201504211080	NDMA-D6 (S)		20	93.6	%	94	(70-130)		
MSD2_201504211080	NDMA-D6 (S)		20	94.4	%	94	(70-130)		
LCS3	N-Nitroso dimethylamine (NDMA)		80	71.8	ng/L	90	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2	2.06	ng/L	103	(50-150)		
MS2_201504211080	N-Nitroso dimethylamine (NDMA)	ND	40	30.1	ng/L	74	(70-130)		
MSD2_201504211080	N-Nitroso dimethylamine (NDMA)	ND	40	32.3	ng/l	79	(70-130)	30	7.0
LCS3	N-Nitrosodibutylamine (NDBA)		80	75.2	ng/L	94	(70-130)		
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/L				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2	1.49	ng/L	74	(50-150)		
MS2_201504211080	N-Nitrosodibutylamine (NDBA)	ND	40	32.2	ng/L	81	(70-130)		
MSD2_201504211080	N-Nitrosodibutylamine (NDBA)	ND	40	30.8	ng/l	77	(70-130)	30	4.1

Spike recovery is already corrected for native results.
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Report: 531113

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS3	N-Nitrosodiethylamine (NDEA)		80	78.4	ng/L	98	(70-130)		
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/L				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2	1.84	ng/L	92	(50-150)		
MS2_201504211080	N-Nitrosodiethylamine (NDEA)	ND	40	32.9	ng/L	82	(70-130)		
MSD2_201504211080	N-Nitrosodiethylamine (NDEA)	ND	40	31.8	ng/L	79	(70-130)	30	3.4
LCS3	N-Nitrosodi-n-propylamin(NDPA)		80	75.6	ng/L	95	(70-130)		
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/L				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2	1.87	ng/L	94	(50-150)		
MS2_201504211080	N-Nitrosodi-n-propylamin(NDPA)	ND	40	31.9	ng/L	78	(70-130)		
MSD2_201504211080	N-Nitrosodi-n-propylamin(NDPA)	ND	40	33.8	ng/l	82	(70-130)	30	5.8
LCS3	N-Nitrosomethylethylamin(NMEA)		80	75.1	ng/L	94	(70-130)		
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/L				
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2	1.80	ng/L	90	(50-150)		
MS2_201504211080	N-Nitrosomethylethylamin(NMEA)	ND	40	33.3	ng/L	83	(70-130)		
MSD2_201504211080	N-Nitrosomethylethylamin(NMEA)	ND	40	34.3	ng/L	86	(70-130)	30	3.0
LCS3	N-Nitrosomorpholine		80	73.4	ng/l	92	(70-130)		
MBLK	N-Nitrosomorpholine			<2	ng/l				
MRL_CHK	N-Nitrosomorpholine		2	1.86	ng/l	93	(50-150)		
MS2_201504211080	N-Nitrosomorpholine	2.2	40	37.4	ng/l	88	(70-130)		
MSD2_201504211080	N-Nitrosomorpholine	2.2	40	36.6	ng/l	86	(70-130)	30	2.2
LCS3	N-Nitrosopiperidine (NPIP)		80	69.9	ng/L	87	(70-130)		
MBLK	N-Nitrosopiperidine (NPIP)			<2	ng/L				
MRL_CHK	N-Nitrosopiperidine (NPIP)		2	1.46	ng/L	73	(50-150)		
MS2_201504211080	N-Nitrosopiperidine (NPIP)	ND	40	33.1	ng/L	83	(70-130)		
MSD2_201504211080	N-Nitrosopiperidine (NPIP)	ND	40	33.1	ng/l	83	(70-130)	30	0.0
LCS3	N-Nitrosopyrollidine (NPYR)		80	75.6	ng/L	95	(70-130)		
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/L				
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2	2.47	ng/L	123	(50-150)		
MS2_201504211080	N-Nitrosopyrollidine (NPYR)	ND	40	36.5	ng/L	91	(70-130)		
MSD2_201504211080	N-Nitrosopyrollidine (NPYR)	ND	40	35.1	ng/L	88	(70-130)	30	3.9

Spike recovery is already corrected for native results.
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RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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CLIENT: **EUROFINS EATON ANALYTICAL**

PROJECT: **531058**

SDG: **15D145**

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GC/MS-SVOA	**	3000 –
GC-VOA	**	4000 –
GC-SVOA	**	5000 –
HPLC	METHOD 8330	6000 – 6007
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 05-05-2015
EMAX Batch No.: 15D145

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 531058

Enclosed is the Laboratory report for samples received on 04/22/15.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
201504211080	D145-01	04/21/15	WATER	NITROAROMATICS & NITRAMINES

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

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Submittal Form & Purchase Order 99-34641 15045

Date: 4/22/2015

REPORTING REQUIRMENTS:** ***Do Not Combine Reports with any other samples submitted under different Folder Numbers!
Report & Invoice must have the Folder # **531058** Sub PO# **99-34641** and Job # **1000014**

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Ship To:
EMAX Laboratories, Inc.
1835 W. 205th St.

Torrance, CA 90501

Phone: 310-618-8889 Fax: 310-618-0818

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified State Certification # & Exp Date for requested tests + matrix.

Samples from: **CALIFORNIA**

Folder #:	Report Due:	Sub PO #:
531058	05/07/2015	99-34641

JLS	Overall Lab Order/Sample ID	*Client Sample ID for reference only*	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
i	201504211080	MW-4-2		04/21/15 0910	DW		
EPA 8330	@8330EDD Emax		@8330EDD Emax				

Relinquished by: Sample Control Date 4/22/15 Time 1600

Received by: Date _____ Time _____

Relinquished by: Sample Control Date _____ Time _____

Received by: Date 04-22-15 Time 1600

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

Temp-1.0 °C

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN 15D145
☐ Fedex ☐ UPS ☐ OSO ☐ Others		Recipient Sherry
☐ EMAX Courier ☑ Client Delivery		Date 4/22/15 Time 1600

COC INSPECTION

☑ Client Name	☑ Client PM/FC	M ☑ Sampler Name	☑ Sampling Date/Time	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☐ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
Safety Issues (if any)	☐ High concentrations expected	☐ From Superfund Site	☐ Rad screening required		

Note:

PACKAGING INSPECTION

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 1.0 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C
Thermometer:	*A - S/N* _____	FM 1/20/15 *B - S/N* 140252070	*C - S/N* 140252067	*D - S/N* _____	

Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.**

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action

4/22/15 AB 4/22/15

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

☐ **Continue to next page.**

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in _____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in _____	D16	Preservation not indicated in _____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in _____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	_____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	_____
D10	No initial/date on corrections in COC/label	D22	_____	R10	_____
D11	Container count mismatch COC vs received	D23	_____	R11	_____
D12	Container size mismatch COC vs received	D24	_____	R12	_____

REVIEWS:

Sample Labeling [signature] **Date** 4/22/15 4/22/15

SRF [signature] **Date** 4/22/15

PM AB **Date** 4/22/15

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

531058

METHOD 8330
EXPLOSIVES

SDG#: 15D145

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 531058

SDG : 15D145

METHOD 8330
EXPLOSIVES

One (1) water sample was received on 04/22/15 to be analyzed for Explosives in accordance with Method 8330 and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. EXD017WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. EXD017WL/EXD017WC - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : EUROFINS EATON ANALYTICAL
Project : 531058

SDG NO. : 15D145
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXD017WB	1	NA	04/29/1516:17	04/23/1517:06	XD27091A	XD27090A	EXD017W	Method Blank
LCS1W	EXD017WL	1	NA	04/29/1516:52	04/23/1517:06	XD27092A	XD27090A	EXD017W	Lab Control Sample (LCS)
LCD1W	EXD017WC	1	NA	04/29/1517:26	04/23/1517:06	XD27093A	XD27090A	EXD017W	LCS Duplicate
201504211080	D145-01	1	NA	04/29/1519:08	04/23/1517:06	XD27096A	XD27090A	EXD017W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/21/15
Project	: 531058	Date Received:	04/22/15
Batch No.	: 15D145	Date Extracted:	04/23/15 17:06
Sample ID:	201504211080	Date Analyzed:	04/29/15 19:08
Lab Samp ID:	D145-01	Dilution Factor:	1
Lab File ID:	XD27096A	Matrix :	WATER
Ext Btch ID:	EXD017W	% Moisture :	NA
Calib. Ref.:	XD27090A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.72	4.000	93.1	30-160

Note: All positive results are confirmed by Biphenyl column

QC SUMMARIES

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	NA
Project	: 531058	Date Received:	04/23/15
Batch No.	: 15D145	Date Extracted:	04/23/15 17:06
Sample ID:	MBLK1W	Date Analyzed:	04/29/15 16:17
Lab Samp ID:	EXD017WB	Dilution Factor:	1
Lab File ID:	XD27091A	Matrix :	WATER
Ext Btch ID:	EXD017W	% Moisture :	NA
Calib. Ref.:	XD27090A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.50	4.000	87.4	70-140

Note: All positive results are confirmed by Biphenyl column

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 531058
BATCH NO.: 15D145
METHOD: METHOD 8330

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	EXD017WB	EXD017WL	EXD017WC		
LAB FILE ID:	XD27091A	XD27092A	XD27093A		
DATE EXTRACTED:	04/23/1517:06	04/23/1517:06	04/23/1517:06	DATE COLLECTED:	NA
DATE ANALYZED:	04/29/1516:17	04/29/1516:52	04/29/1517:26	DATE RECEIVED:	04/23/15
PREP. BATCH:	EXD017W	EXD017W	EXD017W		
CALIB. REF:	XD27090A	XD27090A	XD27090A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
HMX	ND	4.00	3.13	78	4.00	2.96	74	6	60-130	30
RDX	ND	4.00	3.08	77	4.00	2.75	69	11	60-130	30
1,3,5-TNB	ND	4.00	3.61	90	4.00	2.86	72	23	30-130	30
1,3-DNB	ND	4.00	3.40	85	4.00	2.92	73	15	60-130	30
Tetryl	ND	4.00	3.56	89	4.00	2.93	73	19	70-130	30
Nitrobenzene	ND	4.00	2.97	74	4.00	2.87	72	3	60-130	30
2,4,6-TNT	ND	4.00	3.67	92	4.00	2.83	71	26	70-130	30
4-AM-2,6-DNT	ND	4.00	2.92	73	4.00	2.90	72	1	70-130	30
2-AM-4,6-DNT	ND	4.00	3.48	87	4.00	2.98	75	15	70-130	30
2,6-DNT	ND	4.00	3.55	89	4.00	2.99	75	17	70-130	30
2,4-DNT	ND	4.00	3.69	92	4.00	3.00	75	21	70-130	30
2-Nitrotoluene	ND	4.00	3.24	81	4.00	2.89	72	11	70-130	30
3-Nitrotoluene	ND	4.00	3.40	85	4.00	3.18	79	7	70-130	30
4-Nitrotoluene	ND	4.00	3.63	91	4.00	3.27	82	10	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
3,4-Dinitrotoluene	4.00	3.64	91	4.00	3.26	82	70-140

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

ORELAP 4034

AT-1807

Laboratory Report

for

Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109
Attention: David Conner

Date of Issue
05/14/2015

EUROFINS EATON ANALYTICAL

DST: David S Tripp

Project Manager

Report: 531306
Project: TIDEWATER
Group: 2Q15 JPL Triannual
PO#: Sampling

* Accredited in accordance with TNI 2009 and ISO/IEC 17025:2005.
* Laboratory certifies that the test results meet all **TNI 2009 and ISO/IEC 17025:2005** requirements unless noted under the individual analysis.
* Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.
* Test results relate only to the sample(s) tested.

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STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	**Mississippi**	Certified
Alaska	CA00006	**Montana**	Cert 0035
Arizona	AZ0778	**Nebraska**	Certified
Arkansas	Certified	**Nevada**	CA00006-2014-1
California-Monrovia-ELAP	2813	**New Hampshire ***	2959
California-Colton- ELAP	2812	**New Jersey ***	CA 008
California-Folsom- ELAP	2820	**New Mexico**	Certified
Colorado	Certified	**New York ***	11320
Connecticut	PH-0107	**North Carolina**	06701
Delaware	CA 006	**North Dakota**	R-009
Florida *	E871024	**Oregon (Primary AB) ***	**ORELAP 4034**
Georgia	947	**Pennsylvania ***	68-565
Guam	14-003r	**Rhode Island**	LAO00326
Hawaii	Certified	**South Carolina**	87016
Idaho	Certified	**South Dakota**	Certified
Illinois *	200033	**Tennessee**	TN02839
Indiana	C-CA-01	**Texas ***	T104704230-14-7
Kansas *	E-10268	**Utah ***	CA000062014-7
Kentucky	90107	**Vermont**	VT0114
Louisiana *	LA140009	**Virginia ***	460260
Maine	CA0006	**Washington**	C838
Maryland	224	**West Virginia**	9943 C
Commonwealth of Northern Marianas Is.	MP0004	**Wisconsin**	998316660
Massachusetts	M-CA006	**Wyoming**	8TMS-L
Michigan	9906	**EPA Region 5**	Certified
Los Angeles County Sanitation Districts	10264		

* NELAP/TNI Recognized Accreditation Bodies

The tests listed below are accredited and meet the requirements of ISO 17025 as verified by the ANSI-ASQ National Accreditation Board/ACLASS.
Refer to Certificate and scope of accreditation (AT 1807) found at: http://www.eatonanalytical.com

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
1,4-Dioxane	EPA 522	x	x	
2,3,7,8-TCDD	Modified EPA 1613B	x	x	
Acrylamide	In House Method	x	x	
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H (18th)		x	x
Anions and DBPs by IC	EPA 300.0	x	x	x
Anions and DBPs by IC	EPA 300.1	x	x	
Asbestos	EPA 100.2	x		
Bicarbonate Alkalinity as HCO3	SM 2330B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method	x	x	
Carbamates	EPA 531.2	x	x	
Carbonate as CO3	SM 2330B	x	x	x
Carbonyls	EPA 556	x	x	
COD	EPA 410.4 / SM 5220D			x
Chloramines	SM 4500-CL G	x	x	x
Chlorinated Acids	EPA 515.4	x	x	
Chlorinated Acids	EPA 555	x	x	
Chlorine Dioxide	SM 4500-CLO2 D	x	x	
Chlorine -Total/Free/ Combined Residual	SM 4500-Cl G	x	x	x
Conductivity	EPA 120.1			x
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	x	x	
Cyanide, Amenable	SM 4500-CN G	x		x
Cyanide, Free	SM 4500CN F	x	x	x
Cyanide, Total	EPA 335.4	x	x	x
Cyanogen Chloride (screen)	In House Method	x	x	
Diquat and Paraquat	EPA 549.2	x	x	
DBP/HAA	SM 6251B	x	x	
Dissolved Oxygen	SM 4500-O G		x	x
E. Coli	(MTF/EC+MUG)	x		
E. Coli	CFR 141.21(f)(6)(i)		x	x
E. Coli	SM 9223			x
E. Coli (Enumeration)	SM 9221B.1/ SM 9221F	x	x	
E. Coli (Enumeration)	SM 9223B	x	x	
EDB/DCBP	EPA 504.1	x		
EDB/DBCP and DBP	EPA 551.1	x	x	
EDTA and NTA	In House Method	x	x	
Endothall	EPA 548.1	x	x	
Enterococci	SM 9230B	x		x
Fecal Coliform	SM 9221 E (MTF/EC)	x		
Fecal Coliform	SM 9221C, E (MTF/EC)			x
Fecal Coliform (Enumeration)	SM 9221E (MTF/EC)	x	x	
Fecal Coliform with Chlorine Present	SM 9221E			x
Fecal Streptococci	SM 9230B	x		x
Fluoride	SM 4500-F C	x	x	x
Glyphosate	EPA 547	x	x	
Gross Alpha/Beta	EPA 900.0	x	x	x
HAAs/ Dalapon	EPA 552.3	x	x	
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method	x	x	
Heterotrophic Bacteria	SM 9215 B	x	x	
Hexavalent Chromium	EPA 218.6	x	x	x
Hexavalent Chromium	EPA 218.7	x	x	
Hexavalent Chromium	SM 3500-Cr B or C (20th)			x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
Hormones	EPA 539	x	x	
Hydroxide as OH Calc.	SM 2330B	x	x	
Kjeldahl Nitrogen	EPA 351.2			x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA	x	x	
NDMA	EPA 521	x	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x	x
OCL, Pesticides/PCB	EPA 505	x	x	
Ortho Phosphate	EPA 365.1	x	x	
Ortho Phosphate and Total Phosphorous	EPA 365.1/SM 4500-P E			x
Ortho Phosphorous	SM 4500P E	x	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	x	
Perchlorate	EPA 331.0	x	x	
Perchlorate	EPA 314.0	x	x	
Perfluorinated Alkyl Acids	EPA 537	x	x	
pH	EPA 150.1	x		
pH	SM 4500-H+B	x	x	x
Phenylurea Pesticides/ Herbicides	In House Method	x	x	
Pseudomonas	IDEXX Pseudalert	x	x	
Radium-226	RA-226 GA	x	x	
Radium-228	RA-228 GA	x	x	
Radon-222	SM 7500RN	x	x	
Residue, Filterable	SM 2540C	x	x	x
Residue, Non-filterable	SM 2540D			x
Residue, Total	SM 2540B		x	x
Residue, Volatile	EPA 160.4			x
Semi-VOC	EPA 525.2	x	x	
Semi-VOC	EPA 625	x	x	x
Silica	SM 4500-Si D	x	x	x
Silica	SM 4500-SiO2 C	x		x
Sulfide	SM 4500-$S^{=}$ D			x
Sulfite	SM 4500-SO^{3}B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x	x	
Total Coliform	SM 9221 A, B	x	x	
Total Coliform (Enumeration)	SM 9221 A, B, C	x	x	
Total Coliform / E. coli	Colisure	x	x	
Total Coliform	SM 9221B			x
Total Coliform with Chlorine Present	SM 9221B			x
Total Coliform / E.coli	SM 9223	x	x	
TOC	SM 5310C		x	x
TOC/DOC	SM 5310C	x	x	
TOX	SM 5320B			x
Total Phenols	EPA 420.1			x
Total Phenols	EPA 420.4	x	x	x
Total Phosphorous	SM 4500 P F			x
Turbidity	EPA 180.1	x	x	x
Turbidity	SM 2130B	x		x
Uranium by ICP/MS	EPA 200.8	x	x	
UV 254	SM 5910B	x		
VOC	EPA 524.2/EPA 524.3	x	x	
VOC	EPA 624	x	x	x
VOC	EPA SW 846 8260	x	x	
VOC	In House Method	x	x	
Yeast and Mold	SM 9610	x	x	

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Acknowledgement of Samples Received

Addr: **Tidewater, Inc.**
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena91109
Attn: David Conner
Phone: 619-726-7311

Client ID: JPL-CA
Folder #: 531306
Project: TIDEWATER
Sample Group: 2Q15 JPL Triannual Sampling

Project Manager: David S Tripp
Phone: (626) 386-1158
PO #: 1213-000-05

The following samples were received from you on **April 22, 2015** at **1830**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
201504220716	MW-17-3	04/22/2015 1140

@ANIONS48	@8330EDD EMAX	@DIOXANE
@ML521_SPE8	@TCP-524	@VOASDWA
@VOA-TBA	Chlorate by IC	Fluoride
Hexavalent chromium(Dissolved)		

Test Description

@ANIONS48 -- Nitrate, Nitrite by EPA 300.0

@8330EDD EMAX -- @8330EDD Emax

@DIOXANE -- 1,4-Dioxane

@ML521_SPE8 -- Nitrosamines by GCMS

@TCP-524 -- 1,2,3-Trichloropropane (SIM)

@VOASDWA -- Volatile Organics by GCMS

@VOA-TBA -- TBA by EPA 524.2 Modified

750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (626) 386-1101 http://www.EatonAnalytical.com

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CHAIN OF CUSTODY RECORD

531306

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: L-B-S-26 #1464 — **SAMPLES CHECKED AGAINST COC BY:** KO

SAMPLES LOGGED IN BY:

SAMPLES REC'D DAY OF COLLECTION? ☑ (check for yes)

SAMPLE TEMP RECEIVED AT:

☐ Colton / No. California / Arizona ____ °C (Compliance: 4 ± 2 °C)

☑ Monrovia 2.5 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen ____ Partially Frozen ____ Thawed ____ Wet Ice ____ No Ice ____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: ____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: JPL-CA

PROJECT CODE: TIDEWATER Bottle Orders

COMPLIANCE SAMPLES ☐ (check for yes) — **NON-COMPLIANCE SAMPLES** ☐ (check for yes)

- Requires state forms ☐ — REGULATION INVOLVED:

Type of samples (circle one): **ROUTINE SPECIAL CONFIRMATION** (eg. SDWA, Phase V, NPDES, FDA,...)

EEA CLIENT CODE: — **COC ID:** — **SAMPLE GROUP:** Blaine Tech

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☒ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

TAT requested: rush by adv notice only STD ☒ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	SAMPLER COMMENTS
4-22-15	1140	MW-17-3		RGW			

18:30
APR 22 2015
Michael Uribe
Eurofins Eaton Analytical

*** MATRIX TYPES:** **RSW** = Raw Surface Water, **RGW** = Raw Ground Water, **CFW** = Chlor(am)inated Finished Water, **FW** = Other Finished Water, **SEAW** = Sea Water, **WW** = Waste Water, **BW** = Bottled Water, **SW** = Storm Water, **SO** = Soil, **SL** = Sludge, **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	Andy Wolff	Andy Wolff	BlaineTech / Area Supervisor	4-22-15	1140
RELINQUISHED BY:	Andy Wolff	"	"	4-22-15	1600
RECEIVED BY:	[illegible]	L. Barton	EUR	4-22-15	1645
RELINQUISHED BY:	[illegible]	L. Barton	EUR	4-22-15	
RECEIVED BY:					

QA FO 0029 (06/26/2013)

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formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
(626) 386-1100 FAX (626) 386-1101

Kit Order for Jet Propulsion Laboratory

David S Tripp is your Eurofins Eaton Analytical Project Manager

Note: Sampler Please return this paper with your samples

Kit #: 110244
Created By: ADT
Deliver By: 04/10/2015
STG: Bottle Orders
Ice Type: W

Client ID: JPL-CA
Project Code: TIDEWATER Bottle Orders
Group Name: 2Q15 JPL Triannual Sampling
PO#/JOB#: 1213-000-05

Ship Sample Kits to
Jet Propulsion Laboratory
20735 Belshaw Avenue
Carson, CA 90746

Attn: Robert Sunjara
Phone: 310-885-4455 x 115

Send Report to
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

Billing Address
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

# of Sample	Tests	Bottles - Qty for each sample, type & preservative if a	UN DOT #
7	@8330EDD EMAX	2 1L amber glass 1ml thio (8%)	
7	@ANIONS48, Fluoride	1 125ml poly no preservative	
7	@DIOXANE	3 125ml amber glass 6.25 Sulfite +125 mg Bisulfite	
7	@ML521_SPE8	3 500ml amber glass 40-50 mg Na Thiosulfate	
7	@VOASDWA	3 40ml amber glass vial 4drops 6N HCL (36%)	UN1789
7	@VOA-TBA	4 40ml amber glass vial TBA_4 drops 1:1 HCL	UN1789
7	Chlorate by IC	1 60mL poly 0.6mL 1% EDA solution	
7	Hexavalent Chromium (Dissolved)	1 125ml poly 1.25 ml NH4SO4/NH4OH buffer	

Comments

One set per cooler

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Hits
Report: 531306

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/22/2015 1830

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201504220716	**MW-17-3**				
05/06/2015 01:34	Chlorate by IC		440		ug/L	10
04/29/2015 15:54	Fluoride		0.38	4	mg/L	0.05
04/23/2015 19:12	Hexavalent chromium(Dissolved)		0.52		ug/L	0.02
04/23/2015 00:20	Nitrate as Nitrogen by IC		11	10	mg/L	0.2
04/23/2015 00:20	Nitrate as NO3 (calc)		48	45	mg/L	0.88
04/29/2015 08:17	N-Nitrosomorpholine		2.7		ng/l	2
04/29/2015 20:25	Tetrachloroethylene (PCE)		0.87	5	ug/L	0.5
04/29/2015 20:25	Trichloroethylene (TCE)		1.2	5	ug/L	0.5

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data
Report: 531306

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/22/2015 1830

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
MW-17-3 (201504220716)						**Sampled on 04/22/2015 1140**		
		EPA 522 - 1,4-Dioxane						
4/27/2015	04/28/2015	23:15 835464	(EPA 522)	1,4-Dioxane	ND	ug/L	1	1
4/27/2015	04/28/2015	23:15 835464	(EPA 522)	Dioxane-d8	99	%		1
		EPA 521 - Nitrosamines by GCMS						
4/24/2015	04/29/2015	08:17 835657	(EPA 521)	N-Nitrosodibutylamine (NDBA)	ND	ng/L	2	1
4/24/2015	04/29/2015	08:17 835657	(EPA 521)	N-Nitrosodiethylamine (NDEA)	ND	ng/L	2	1
4/24/2015	04/29/2015	08:17 835657	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
4/24/2015	04/29/2015	08:17 835657	(EPA 521)	N-Nitrosodi-n-propylamine (NDPA)	ND	ng/L	2	1
4/24/2015	04/29/2015	08:17 835657	(EPA 521)	N-Nitrosomethylethylamine (NMEA)	ND	ng/L	2	1
4/24/2015	04/29/2015	08:17 835657	(EPA 521)	N-Nitrosomorpholine	2.7	ng/l	2	1
4/24/2015	04/29/2015	08:17 835657	(EPA 521)	N-Nitrosopiperidine (NPIP)	ND	ng/L	2	1
4/24/2015	04/29/2015	08:17 835657	(EPA 521)	N-Nitrosopyrollidine (NPYR)	ND (VC)	ng/L	2	1
4/24/2015	04/29/2015	08:17 835657	(EPA 521)	NDMA-D6	99	%		1
		EPA 218.6 - Hexavalent chromium(Dissolved)						
	04/23/2015	19:12 834678	(EPA 218.6)	Hexavalent chromium(Dissolved)	0.52	ug/L	0.02	1
		EPA 300.0 - Nitrate, Nitrite by EPA 300.0						
	04/23/2015	00:20 834369	(EPA 300.0)	Nitrate as Nitrogen by IC	11	mg/L	0.2	2
	04/23/2015	00:20 834369	(EPA 300.0)	Nitrate as NO3 (calc)	48	mg/L	0.88	2
		EPA 300.0 - Disinfection ByProducts by 300.0						
	05/06/2015	01:34 836918	(EPA 300.0)	Chlorate by IC	440	ug/L	10	1
		EPA 8330 - @8330EDD Emax						
	04/29/2015	19:43	(EPA 8330)	1,3,5-TNB	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	1,3-DNB	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	2,4,6-TNT	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	2,4-DNT	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	2,6-DNT	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	2-AM-4,6DNT	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	2-Nitrotoluene	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	3-Nitrotoluene	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	4-AM-2,6-DNT	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	4-Nitrotoluene	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	HMX	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	Nitrobenzene	ND	ug/L	0.4	1
	04/29/2015	19:43	(EPA 8330)	RDX	ND	ug/L	0.4	1

Rounding on totals after summation.
(c) - indicates calculated results

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Samples Received on:
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Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	04/29/2015	19:43		(EPA 8330)	Tetryl	ND	ug/L	0.4	1
	04/29/2015	19:43		(EPA 8330)	3,4-Dinitrotoluene	75	%		1
		EPA 524.2 - Volatile Organics by GCMS							
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Benzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Bromobenzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Bromoethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Bromoform	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Chloroethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Chloroform (Trichloromethane)	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Dibromomethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Dichloromethane	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	m,p-Xylenes	ND (LE)	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Naphthalene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	o-Xylene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Styrene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Tetrachloroethylene (PCE)	0.87	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Toluene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Total THM	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Total xylenes	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Trichloroethylene (TCE)	1.2	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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04/22/2015 1830

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.5	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.3	1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	1,2-Dichloroethane-d4	103	%		1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	4-Bromofluorobenzene	98	%		1
4/29/2015	04/29/2015	20:25	835723	(EPA 524.2)	Toluene-d8	100	%		1
		CASRL 524M-TCP - 1,2,3-Trichloropropane (SIM)							
5/7/2015	05/07/2015	16:25	837297	(CASRL 524M-TCP)	1,2,3-Trichloropropane	ND (H1)	ug/L	0.005	1
5/7/2015	05/07/2015	16:25	837297	(CASRL 524M-TCP)	Toluene-d8	93 (H1)	%		1
		EPA 524.2 SIM - TBA by EPA 524.2 Modified							
4/30/2015	04/30/2015	15:40	835946	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2	1
4/30/2015	04/30/2015	15:40	835946	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	108	%		1
4/30/2015	04/30/2015	15:40	835946	(EPA 524.2 SIM)	4-Bromofluorobenzene	90	%		1
4/30/2015	04/30/2015	15:40	835946	(EPA 524.2 SIM)	Toluene-d8	92	%		1
		SM 4500F-C - Fluoride							
	04/29/2015	15:54	835493	(SM 4500F-C)	Fluoride	0.38	mg/L	0.05	1

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Laboratory Comments
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Folder Comments

Analytical results for 8330 are submitted by Emax Laboratories, Inc. Torrance, CA CA
NELAC 02116CA

Flags Legend:

H1 - Sample analysis performed past holding time. Data not acceptable for regulatory compliance.

LE - MRL Check recovery was above laboratory acceptance limits.

VC - CCV is high biased, ND data are reportable as per TNI V1M4 1.7.2.e).i.

The Comments Report may be blank if there are no comments for this report.

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QC Ref # 834369 - Nitrate, Nitrite by EPA 300.0 **Analysis Date: 04/23/2015**
201504220716 MW-17-3 Analyzed by: CYP

QC Ref # 834678 - Hexavalent chromium(Dissolved) **Analysis Date: 04/23/2015**
201504220716 MW-17-3 Analyzed by: TLH

QC Ref # 835464 - 1,4-Dioxane **Analysis Date: 04/28/2015**
201504220716 MW-17-3 Analyzed by: JYH

QC Ref # 835493 - Fluoride **Analysis Date: 04/29/2015**
201504220716 MW-17-3 Analyzed by: MIA8

QC Ref # 835657 - Nitrosamines by GCMS **Analysis Date: 04/29/2015**
201504220716 MW-17-3 Analyzed by: PAC

QC Ref # 835723 - Volatile Organics by GCMS **Analysis Date: 04/29/2015**
201504220716 MW-17-3 Analyzed by: KCP

QC Ref # 835946 - TBA by EPA 524.2 Modified **Analysis Date: 04/30/2015**
201504220716 MW-17-3 Analyzed by: KCP

QC Ref # 836918 - Disinfection ByProducts by 300.0 **Analysis Date: 05/06/2015**
201504220716 MW-17-3 Analyzed by: NJR

QC Ref # 837297 - 1,2,3-Trichloropropane (SIM) **Analysis Date: 05/07/2015**
201504220716 MW-17-3 Analyzed by: KAM

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 834369 - Nitrate, Nitrite by EPA 300.0 by EPA 300.0						**Analysis Date: 04/22/2015**			
LCS1	Nitrate as Nitrogen by IC		2.5	2.48	mg/L	99	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.50	mg/L	100	(90-110)	20	0.80
MBLK	Nitrate as Nitrogen by IC			<0.10	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0480	mg/L	96	(50-150)		
MRLLW	Nitrate as Nitrogen by IC		0.013	0.0122	mg/L	98	(50-150)		
MS_201504220716	Nitrate as Nitrogen by IC	11	2.6	13.2	mg/L	97	(80-120)		
MS_201504100071	Nitrate as Nitrogen by IC	11	2.6	13.0	mg/L	96	(80-120)		
MSD_201504100071	Nitrate as Nitrogen by IC	11	2.6	13.0	mg/L	95	(80-120)	20	0.0
MSD_201504220716	Nitrate as Nitrogen by IC	11	2.6	13.2	mg/L	99	(80-120)	20	0.0
QC Ref# 834678 - Hexavalent chromium(Dissolved) by EPA 218.6						**Analysis Date: 04/23/2015**			
LCS1	Hexavalent chromium(Dissolved)		2	2.00	ug/L	100	(90-110)		
LCS2	Hexavalent chromium(Dissolved)		2	1.98	ug/L	99	(90-110)		
MBLK	Hexavalent chromium(Dissolved)			<0.020	ug/L				
MRL_CHK	Hexavalent chromium(Dissolved)		0.02	0.0196	ug/L	98	(50-150)		
MS_201504211091	Hexavalent chromium(Dissolved)	0.18	2	2.24	ug/L	103	(90-110)		
MS_201501190028	Hexavalent chromium(Dissolved)	1.5	2	3.64	ug/L	105	(90-110)		
MSD_201501190028	Hexavalent chromium(Dissolved)	1.5	2	3.54	ug/L	100	(90-110)	20	2.8
MSD_201504211091	Hexavalent chromium(Dissolved)	0.18	2	2.24	ug/L	103	(90-110)	20	0.0
QC Ref# 835464 - 1,4-Dioxane by EPA 522						**Analysis Date: 04/28/2015**			
LCS1	Dioxane		20	22.1	ug/L	110	(70-130)		
MBLK	Dioxane			<1	ug/L				
MRLLW	Dioxane		0.07	0.0650	ug/L	93	(50-150)		
MS_201504240022	Dioxane	ND	20	20.9	ug/L	105	(70-130)		
MSD_201504240022	Dioxane	ND	20	19.2	ug/L	96	(30-130)	20	8.5
LCS1	Dioxane-d8 (S)			109	%	109	(70-130)		
MBLK	Dioxane-d8 (S)			97.1	%	97	(70-130)		
MRLLW	Dioxane-d8 (S)			99.8	%	100	(70-130)		
MS_201504240022	Dioxane-d8 (S)			102	%	102	(70-130)		
MSD_201504240022	Dioxane-d8 (S)			96.8	%	97	(70-130)		
QC Ref# 835493 - Fluoride by SM 4500F-C						**Analysis Date: 04/29/2015**			
LCS1	Fluoride		1	1.00	mg/L	101	(81-116)		
LCS2	Fluoride		1	1.00	mg/L	100	(81-116)	20	1
MBLK	Fluoride			<0.05	mg/L				
MRL_CHK	Fluoride		0.05	0.0484	mg/L	97	(50-150)		
MS_201504220162	Fluoride	0.12	1	1.14	mg/L	101	(80-120)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531306

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_201504220180	Fluoride	ND	1	0.999	mg/L	100	(80-120)		
MSD_201504220162	Fluoride	0.12	1	1.15	mg/L	103	(80-120)	20	0.87
MSD_201504220180	Fluoride	ND	1	1.00	mg/L	100	(80-120)	20	0.10
QC Ref# 835657 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 04/28/2015**			
LCS1	NDMA-D6 (S)		20	106	%	106	(70-130)		
MBLK	NDMA-D6 (S)			117	%	117	(70-130)		
MRL_CHK	NDMA-D6 (S)		20	104	%	104	(70-130)		
MS1_201504220704	NDMA-D6 (S)		20	103	%	103	(70-130)		
MSD1_201504220704	NDMA-D6 (S)		20	89.9	%	90	(70-130)		
LCS1	N-Nitroso dimethylamine (NDMA)		40	34.5	ng/L	86	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2	2.09	ng/L	105	(50-150)		
MS1_201504220704	N-Nitroso dimethylamine (NDMA)	ND	2	1.80	ng/L	90	(50-150)		
MSD1_201504220704	N-Nitroso dimethylamine (NDMA)	ND	2	1.46	ng/L	73	(50-150)	30	21
LCS1	N-Nitrosodibutylamine (NDBA)		40	32.1	ng/L	80	(70-130)		
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/L				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2	1.73	ng/L	87	(50-150)		
MS1_201504220704	N-Nitrosodibutylamine (NDBA)		2	1.76	ng/L	88	(50-150)		
MSD1_201504220704	N-Nitrosodibutylamine (NDBA)		2	1.31	ng/L	66	(50-150)	30	29
LCS1	N-Nitrosodiethylamine (NDEA)		40	31.7	ng/L	79	(70-130)		
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/L				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2	2.23	ng/L	112	(50-150)		
MS1_201504220704	N-Nitrosodiethylamine (NDEA)		2	2.18	ng/L	109	(50-150)		
MSD1_201504220704	N-Nitrosodiethylamine (NDEA)		2	1.96	ng/L	98	(50-150)	30	11
LCS1	N-Nitrosodi-n-propylamin(NDPA)		40	29.6	ng/L	74	(70-130)		
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/L				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2	2.34	ng/L	117	(50-150)		
MS1_201504220704	N-Nitrosodi-n-propylamin(NDPA)		2	1.88	ng/L	94	(50-150)		
MSD1_201504220704	N-Nitrosodi-n-propylamin(NDPA)		2	1.59	ng/L	80	(50-150)	30	17
LCS1	N-Nitrosomethylethylamin(NMEA)		40	34.2	ng/L	86	(70-130)		
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/L				
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2	2.23	ng/L	112	(50-150)		
MS1_201504220704	N-Nitrosomethylethylamin(NMEA)		2	2.06	ng/L	103	(50-150)		
MSD1_201504220704	N-Nitrosomethylethylamin(NMEA)		2	1.83	ng/L	92	(50-150)	30	12
LCS1	N-Nitrosomorpholine		40	35.1	ng/l	88	(70-130)		
MBLK	N-Nitrosomorpholine			<2	ng/l				
MRL_CHK	N-Nitrosomorpholine		2	1.85	ng/l	93	(50-150)		
MS1_201504220704	N-Nitrosomorpholine		2	1.75	ng/l	88	(50-150)		

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Laboratory QC
Report: 531306

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MSD1_201504220704	N-Nitrosomorpholine		2	1.51	ng/l	76	(50-150)	30	15
LCS1	N-Nitrosopiperidine (NPIP)		40	31.6	ng/L	79	(70-130)		
MBLK	N-Nitrosopiperidine (NPIP)			<2	ng/L				
MRL_CHK	N-Nitrosopiperidine (NPIP)		2	2.15	ng/L	107	(50-150)		
MS1_201504220704	N-Nitrosopiperidine (NPIP)		2	2.11	ng/L	105	(50-150)		
MSD1_201504220704	N-Nitrosopiperidine (NPIP)		2	1.99	ng/l	100	(50-150)	30	5.8
LCS1	N-Nitrosopyrollidine (NPYR)		40	31.6	ng/L	79	(70-130)		
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/L				
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2	2.59	ng/L	130	(50-150)		
MS1_201504220704	N-Nitrosopyrollidine (NPYR)		2	2.58	ng/L	129	(50-150)		
MSD1_201504220704	N-Nitrosopyrollidine (NPYR)		2	2.30	ng/L	115	(50-150)	30	12
QC Ref# 835723 - Volatile Organics by GCMS by EPA 524.2						**Analysis Date: 04/29/2015**			
LCS1	1,1,1,2-Tetrachloroethane		5	4.82	ug/L	96	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	4.77	ug/L	95	(70-130)	20	1.0
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,1,2-Tetrachloroethane		0.5	0.420	ug/L	84	(50-150)		
LCS1	1,1,1-Trichloroethane		5	4.41	ug/L	88	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.29	ug/L	86	(70-130)	20	2.8
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,1-Trichloroethane		0.5	0.470	ug/L	94	(50-150)		
LCS1	1,1,2,2-Tetrachloroethane		5	5.08	ug/L	102	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	5.19	ug/L	104	(70-130)	20	2.1
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,2,2-Tetrachloroethane		0.5	0.530	ug/L	106	(50-150)		
LCS1	1,1,2-Trichloroethane		5	4.62	ug/L	92	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.64	ug/L	93	(70-130)	20	0.43
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	1,1-Dichloroethane		5	4.83	ug/L	97	(70-130)		
LCS2	1,1-Dichloroethane		5	4.66	ug/L	93	(70-130)	20	3.6
MBLK	1,1-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	1,1-Dichloroethylene		5	4.43	ug/L	89	(70-130)		
LCS2	1,1-Dichloroethylene		5	4.44	ug/L	89	(70-130)	20	0.23
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.550	ug/L	110	(50-150)		
LCS1	1,1-Dichloropropene		5	4.56	ug/L	91	(70-130)		

Spike recovery is already corrected for native results.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
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Laboratory QC
Report: 531306

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	1,1-Dichloropropene		5	4.39	ug/L	88	(70-130)	20	3.8
MBLK	1,1-Dichloropropene			<0.5	ug/L				
MRL_CHK	1,1-Dichloropropene		0.5	0.530	ug/L	106	(50-150)		
LCS1	1,2,3-Trichlorobenzene		5	4.76	ug/L	95	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	4.57	ug/L	91	(70-130)	20	4.1
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,3-Trichlorobenzene		0.5	0.590	ug/L	118	(50-150)		
LCS1	1,2,3-Trichloropropane		5	5.01	ug/L	100	(70-130)		
LCS2	1,2,3-Trichloropropane		5	5.09	ug/L	102	(70-130)	20	1.6
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.5	0.560	ug/L	112	(50-150)		
LCS1	1,2,4-Trichlorobenzene		5	5.03	ug/L	101	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	4.73	ug/L	95	(70-130)	20	6.2
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.580	ug/L	116	(50-150)		
LCS1	1,2,4-Trimethylbenzene		5	5.00	ug/L	100	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	4.86	ug/L	97	(70-130)	20	2.8
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trimethylbenzene		0.5	0.460	ug/L	92	(50-150)		
LCS1	1,2-Dichloroethane		5	4.89	ug/L	98	(70-130)		
LCS2	1,2-Dichloroethane		5	4.71	ug/L	94	(70-130)	20	3.8
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.530	ug/L	106	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)			99.0	%	99	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			99.6	%	100	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			102	%	102	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			99.4	%	99	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)			113	%	113	(70-130)		
LCS1	1,2-Dichloropropane		5	4.71	ug/L	94	(70-130)		
LCS2	1,2-Dichloropropane		5	4.66	ug/L	93	(70-130)	20	1.1
MBLK	1,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,2-Dichloropropane		0.5	0.540	ug/L	108	(50-150)		
LCS1	1,3,5-Trimethylbenzene		5	5.06	ug/L	101	(70-130)		
LCS2	1,3,5-Trimethylbenzene		5	4.79	ug/L	96	(70-130)	20	5.5
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,3,5-Trimethylbenzene		0.5	0.460	ug/L	92	(50-150)		
LCS1	1,3-Dichloropropane		5	4.88	ug/L	98	(70-130)		
LCS2	1,3-Dichloropropane		5	4.75	ug/L	95	(70-130)	20	2.7

Spike recovery is already corrected for native results.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531306

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	1,3-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,3-Dichloropropane		0.5	0.520	ug/L	104	(50-150)		
LCS1	2,2-Dichloropropane		5	4.33	ug/L	87	(70-130)		
LCS2	2,2-Dichloropropane		5	4.23	ug/L	85	(70-130)	20	2.3
MBLK	2,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	2,2-Dichloropropane		0.5	0.610	ug/L	122	(50-150)		
LCS1	2-Butanone (MEK)		50	47.4	ug/L	95	(70-130)		
LCS2	2-Butanone (MEK)		50	46.6	ug/L	93	(70-130)	20	1.7
MBLK	2-Butanone (MEK)			<5.0	ug/L				
MRL_CHK	2-Butanone (MEK)		5	5.35	ug/L	107	(50-150)		
LCS1	4-Bromofluorobenzene (S)			98.4	%	98	(70-130)		
LCS2	4-Bromofluorobenzene (S)			100	%	100	(70-130)		
MBLK	4-Bromofluorobenzene (S)			101	%	101	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			101	%	101	(70-130)		
MRLLW	4-Bromofluorobenzene (S)			81.0	%	81	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	50.6	ug/L	101	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	49.6	ug/L	99	(70-130)	20	2.0
MBLK	4-Methyl-2-Pentanone (MIBK)			<5	ug/L				
MRL_CHK	4-Methyl-2-Pentanone (MIBK)		5	5.24	ug/L	105	(50-150)		
LCS1	Benzene		5	5.01	ug/L	100	(70-130)		
LCS2	Benzene		5	4.94	ug/L	99	(70-130)	20	1.4
MBLK	Benzene			<0.5	ug/L				
MRL_CHK	Benzene		0.5	0.590	ug/L	118	(50-150)		
LCS1	Bromobenzene		5	4.82	ug/L	96	(70-130)		
LCS2	Bromobenzene		5	4.71	ug/L	94	(70-130)	20	2.3
MBLK	Bromobenzene			<0.5	ug/L				
MRL_CHK	Bromobenzene		0.5	0.580	ug/L	116	(50-150)		
LCS1	Bromochloromethane		5	4.88	ug/L	98	(70-130)		
LCS2	Bromochloromethane		5	4.76	ug/L	95	(70-130)	20	2.5
MBLK	Bromochloromethane			<0.5	ug/L				
MRL_CHK	Bromochloromethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	Bromodichloromethane		5	4.77	ug/L	95	(70-130)		
LCS2	Bromodichloromethane		5	4.50	ug/L	90	(70-130)	20	5.8
MBLK	Bromodichloromethane			<0.5	ug/L				
MRL_CHK	Bromodichloromethane		0.5	0.420	ug/L	84	(50-150)		
LCS1	Bromoethane		5	4.71	ug/L	94	(70-130)		
LCS2	Bromoethane		5	4.83	ug/L	97	(70-130)	20	2.5
MBLK	Bromoethane			<0.5	ug/L				

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Report: 531306

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	Bromoethane		0.5	0.600	ug/L	120	(50-150)		
LCS1	Bromoform		5	4.73	ug/L	95	(70-130)		
LCS2	Bromoform		5	4.39	ug/L	88	(70-130)	20	7.5
MBLK	Bromoform			<0.5	ug/L				
MRL_CHK	Bromoform		0.5	0.650	ug/L	130	(50-150)		
LCS1	Bromomethane (Methyl Bromide)		5	4.89	ug/L	98	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	4.93	ug/L	99	(70-130)	20	0.82
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
MRL_CHK	Bromomethane (Methyl Bromide)		0.5	0.540	ug/L	108	(50-150)		
LCS1	Carbon disulfide		5	4.33	ug/L	87	(70-130)		
LCS2	Carbon disulfide		5	4.00	ug/L	80	(70-130)	20	7.9
MBLK	Carbon disulfide			<0.5	ug/L				
MRL_CHK	Carbon disulfide		0.5	0.480	ug/L	96	(50-150)		
LCS1	Carbon Tetrachloride		5	4.07	ug/L	81	(70-130)		
LCS2	Carbon Tetrachloride		5	4.00	ug/L	80	(70-130)	20	1.7
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.430	ug/L	86	(50-150)		
LCS1	Chlorobenzene		5	5.05	ug/L	101	(70-130)		
LCS2	Chlorobenzene		5	4.91	ug/L	98	(70-130)	20	2.8
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.570	ug/L	114	(50-150)		
LCS1	Chlorodibromomethane		5	4.76	ug/L	95	(70-130)		
LCS2	Chlorodibromomethane		5	4.47	ug/L	89	(70-130)	20	6.3
MBLK	Chlorodibromomethane			<0.5	ug/L				
MRL_CHK	Chlorodibromomethane		0.5	0.710	ug/L	142	(50-150)		
LCS1	Chloroethane		5	4.78	ug/L	96	(70-130)		
LCS2	Chloroethane		5	4.56	ug/L	91	(70-130)	20	4.7
MBLK	Chloroethane			<0.5	ug/L				
MRL_CHK	Chloroethane		0.5	0.450	ug/L	90	(50-150)		
LCS1	Chloroform (Trichloromethane)		5	4.73	ug/L	95	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.65	ug/L	93	(70-130)	20	1.7
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
MRL_CHK	Chloroform (Trichloromethane)		0.5	0.440	ug/L	88	(50-150)		
LCS1	Chloromethane(Methyl Chloride)		5	4.44	ug/L	89	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	4.20	ug/L	84	(70-130)	20	5.6
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
MRL_CHK	Chloromethane(Methyl Chloride)		0.5	0.630	ug/L	126	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	4.87	ug/L	97	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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Laboratory QC
Report: 531306

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	cis-1,2-Dichloroethylene		5	4.72	ug/L	94	(70-130)	20	3.1
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.570	ug/L	114	(50-150)		
LCS1	cis-1,3-Dichloropropene		5	4.47	ug/L	89	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	4.32	ug/L	86	(70-130)	20	3.4
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	cis-1,3-Dichloropropene		0.5	0.610	ug/L	122	(50-150)		
LCS1	Dibromomethane		5	4.74	ug/L	95	(70-130)		
LCS2	Dibromomethane		5	4.71	ug/L	94	(70-130)	20	0.64
MBLK	Dibromomethane			<0.5	ug/L				
MRL_CHK	Dibromomethane		0.5	0.490	ug/L	98	(50-150)		
LCS1	Dichlorodifluoromethane		5	4.26	ug/L	85	(70-130)		
LCS2	Dichlorodifluoromethane		5	4.17	ug/L	83	(70-130)	20	2.1
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
MRL_CHK	Dichlorodifluoromethane		0.5	0.550	ug/L	110	(50-150)		
LCS1	Dichloromethane		5	4.37	ug/L	87	(70-130)		
LCS2	Dichloromethane		5	4.40	ug/L	88	(70-130)	20	0.68
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.590	ug/L	118	(50-150)		
LCS1	Di-isopropyl ether		5	4.95	ug/L	99	(70-130)		
LCS2	Di-isopropyl ether		5	4.90	ug/L	98	(70-130)	20	1.0
MBLK	Di-isopropyl ether			<3.0	ug/L				
MRL_CHK	Di-isopropyl ether		0.5	0.570	ug/L	114	(50-150)		
LCS1	Ethyl benzene		5	5.12	ug/L	102	(70-130)		
LCS2	Ethyl benzene		5	4.96	ug/L	99	(70-130)	20	3.2
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.550	ug/L	110	(50-150)		
LCS1	Hexachlorobutadiene		5	5.20	ug/L	104	(70-130)		
LCS2	Hexachlorobutadiene		5	4.81	ug/L	96	(70-130)	20	7.8
MBLK	Hexachlorobutadiene			<0.5	ug/L				
MRL_CHK	Hexachlorobutadiene		0.5	0.550	ug/L	110	(50-150)		
LCS1	Isopropylbenzene		5	4.76	ug/L	95	(70-130)		
LCS2	Isopropylbenzene		5	4.67	ug/L	93	(70-130)	20	1.9
MBLK	Isopropylbenzene			<0.5	ug/L				
MRL_CHK	Isopropylbenzene		0.5	0.560	ug/L	112	(50-150)		
LCS1	m,p-Xylenes		10	9.94	ug/L	99	(70-130)		
LCS2	m,p-Xylenes		10	9.54	ug/L	95	(70-130)	20	4.1
MBLK	m,p-Xylenes			<0.5	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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Laboratory QC
Report: 531306

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	m,p-Xylenes		1	1.02	ug/L	102	(50-150)		
MRLLW	m,p-Xylenes		0.5	1.15	ug/L	**230**	(50-150)		
LCS1	m-Dichlorobenzene (1,3-DCB)		5	4.91	ug/L	98	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	4.87	ug/L	97	(70-130)	20	0.82
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
MRL_CHK	m-Dichlorobenzene (1,3-DCB)		0.5	0.550	ug/L	110	(50-150)		
LCS1	Methyl Tert-butyl ether (MTBE)		5	4.85	ug/L	97	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.95	ug/L	99	(70-130)	20	2.0
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
MRL_CHK	Methyl Tert-butyl ether (MTBE)		0.5	0.580	ug/L	116	(50-150)		
LCS1	Naphthalene		5	5.23	ug/L	105	(70-130)		
LCS2	Naphthalene		5	5.19	ug/L	104	(70-130)	20	0.77
MBLK	Naphthalene			<0.5	ug/L				
MRL_CHK	Naphthalene		0.5	0.580	ug/L	116	(50-150)		
LCS1	n-Butylbenzene		5	4.79	ug/L	96	(70-130)		
LCS2	n-Butylbenzene		5	4.51	ug/L	90	(70-130)	20	6.0
MBLK	n-Butylbenzene			<0.5	ug/L				
MRL_CHK	n-Butylbenzene		0.5	0.520	ug/L	104	(50-150)		
LCS1	n-Propylbenzene		5	4.73	ug/L	95	(70-130)		
LCS2	n-Propylbenzene		5	4.62	ug/L	92	(70-130)	20	2.4
MBLK	n-Propylbenzene			<0.5	ug/L				
MRL_CHK	n-Propylbenzene		0.5	0.510	ug/L	102	(50-150)		
LCS1	o-Chlorotoluene		5	5.03	ug/L	101	(70-130)		
LCS2	o-Chlorotoluene		5	4.93	ug/L	99	(70-130)	20	2.0
MBLK	o-Chlorotoluene			<0.5	ug/L				
MRL_CHK	o-Chlorotoluene		0.5	0.560	ug/L	112	(50-150)		
LCS1	o-Dichlorobenzene (1,2-DCB)		5	4.74	ug/L	95	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	4.56	ug/L	91	(70-130)	20	3.9
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
MRL_CHK	o-Dichlorobenzene (1,2-DCB)		0.5	0.560	ug/L	112	(50-150)		
LCS1	o-Xylene		5	5.01	ug/L	100	(70-130)		
LCS2	o-Xylene		5	4.68	ug/L	94	(70-130)	20	6.8
MBLK	o-Xylene			<0.5	ug/L				
MRL_CHK	o-Xylene		0.5	0.510	ug/L	102	(50-150)		
LCS1	p-Chlorotoluene		5	4.77	ug/L	95	(70-130)		
LCS2	p-Chlorotoluene		5	4.74	ug/L	95	(70-130)	20	0.63
MBLK	p-Chlorotoluene			<0.5	ug/L				
MRL_CHK	p-Chlorotoluene		0.5	0.570	ug/L	114	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531306

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	p-Dichlorobenzene (1,4-DCB)		5	4.77	ug/L	95	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	4.81	ug/L	96	(70-130)	20	0.84
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
MRL_CHK	p-Dichlorobenzene (1,4-DCB)		0.5	0.540	ug/L	108	(50-150)		
LCS1	p-Isopropyltoluene		5	4.94	ug/L	99	(70-130)		
LCS2	p-Isopropyltoluene		5	4.84	ug/L	97	(70-130)	20	2.0
MBLK	p-Isopropyltoluene			<0.5	ug/L				
MRL_CHK	p-Isopropyltoluene		0.5	0.530	ug/L	106	(50-150)		
LCS1	sec-Butylbenzene		5	4.87	ug/L	97	(70-130)		
LCS2	sec-Butylbenzene		5	4.82	ug/L	96	(70-130)	20	1.0
MBLK	sec-Butylbenzene			<0.5	ug/L				
MRL_CHK	sec-Butylbenzene		0.5	0.560	ug/L	112	(50-150)		
LCS1	Styrene		5	4.76	ug/L	95	(70-130)		
LCS2	Styrene		5	4.59	ug/L	92	(70-130)	20	3.6
MBLK	Styrene			<0.5	ug/L				
MRL_CHK	Styrene		0.5	0.660	ug/L	132	(50-150)		
LCS1	tert-amyl Methyl Ether		5	4.91	ug/L	98	(70-130)		
LCS2	tert-amyl Methyl Ether		5	4.88	ug/L	98	(70-130)	20	0.61
MBLK	tert-amyl Methyl Ether			<3	ug/L				
MRL_CHK	tert-amyl Methyl Ether		0.5	0.550	ug/L	110	(50-150)		
LCS1	tert-Butyl Ethyl Ether		5	5.10	ug/L	102	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	4.90	ug/L	98	(70-130)	20	4.0
MBLK	tert-Butyl Ethyl Ether			<3	ug/L				
MRL_CHK	tert-Butyl Ethyl Ether		0.5	0.560	ug/L	112	(50-150)		
LCS1	tert-Butylbenzene		5	4.69	ug/L	94	(70-130)		
LCS2	tert-Butylbenzene		5	4.70	ug/L	94	(70-130)	20	0.21
MBLK	tert-Butylbenzene			<0.5	ug/L				
MRL_CHK	tert-Butylbenzene		0.5	0.550	ug/L	110	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	4.48	ug/L	90	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.39	ug/L	88	(70-130)	20	2.0
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.560	ug/L	112	(50-150)		
LCS1	Toluene		5	4.86	ug/L	97	(70-130)		
LCS2	Toluene		5	4.72	ug/L	94	(70-130)	20	2.9
MBLK	Toluene			<0.5	ug/L				
MRL_CHK	Toluene		0.5	0.570	ug/L	114	(50-150)		
LCS1	Toluene-d8 (S)			103	%	103	(70-130)		
LCS2	Toluene-d8 (S)			100	%	100	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531306

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Toluene-d8 (S)			102	%	102	(70-130)		
MRL_CHK	Toluene-d8 (S)			98.2	%	98	(70-130)		
MRLLW	Toluene-d8 (S)			95.6	%	96	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.78	ug/L	96	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	4.86	ug/L	97	(70-130)	20	1.7
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.520	ug/L	104	(50-150)		
LCS1	trans-1,3-Dichloropropene		5	4.61	ug/L	92	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	4.34	ug/L	87	(70-130)	20	6.0
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	trans-1,3-Dichloropropene		0.5	0.690	ug/L	138	(50-150)		
LCS1	Trichloroethylene (TCE)		5	4.69	ug/L	94	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.50	ug/L	90	(70-130)	20	4.1
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.550	ug/L	110	(50-150)		
LCS1	Trichlorofluoromethane		5	3.84	ug/L	77	(70-130)		
LCS2	Trichlorofluoromethane		5	3.71	ug/L	74	(70-130)	20	3.4
MBLK	Trichlorofluoromethane			<0.5	ug/L				
MRL_CHK	Trichlorofluoromethane		0.5	0.530	ug/L	106	(50-150)		
LCS1	Trichlorotrifluoroethane(Freon		5	4.12	ug/L	82	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon		5	4.00	ug/L	80	(70-130)	20	3.0
MBLK	Trichlorotrifluoroethane(Freon			<0.5	ug/L				
MRL_CHK	Trichlorotrifluoroethane(Freon		0.5	0.480	ug/L	96	(50-150)		
LCS1	Vinyl chloride (VC)		5	4.47	ug/L	89	(70-130)		
LCS2	Vinyl chloride (VC)		5	4.36	ug/L	87	(70-130)	20	2.5
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.560	ug/L	112	(50-150)		
MRLLW	Vinyl chloride (VC)		0.25	0.200	ug/L	80	(50-150)		
QC Ref# 835946 - TBA by EPA 524.2 Modified by EPA 524.2 SIM						**Analysis Date: 04/30/2015**			
LCS1	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			108	%	108	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
LCS1	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS2	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MBLK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS1	t-Butyl Alcohol		5	4.57	ug/L	91	(70-130)		

Spike recovery is already corrected for native results.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	t-Butyl Alcohol		5	4.50	ug/L	90	(70-130)	20	1.5
MBLK	t-Butyl Alcohol			<1	ug/L				
MRL_CHK	t-Butyl Alcohol		2	2.44	ug/L	122	(50-150)		
LCS1	Toluene-d8 (S)			96.0	%	96	(70-130)		
LCS2	Toluene-d8 (S)			96.0	%	96	(70-130)		
MBLK	Toluene-d8 (S)			98.0	%	98	(70-130)		
MRL_CHK	Toluene-d8 (S)			96.0	%	96	(70-130)		
QC Ref# 836918 - Disinfection ByProducts by 300.0 by EPA 300.0						**Analysis Date: 05/05/2015**			
LCS1	Chlorate by IC		200	199	ug/L	99	(90-110)		
LCS2	Chlorate by IC		200	200	ug/L	100	(90-110)	20	0.50
MBLK	Chlorate by IC			<10	ug/L				
MRL_CHK	Chlorate by IC		10	9.77	ug/L	98	(75-125)		
MS_201504280617	Chlorate by IC	ND	100	95.5	ug/L	96	(80-120)		
MS_201505010171	Chlorate by IC	35	100	130	ug/L	95	(80-120)		
MSD_201505010171	Chlorate by IC	35	100	132	ug/L	97	(80-120)	15	1.5
MSD_201504280617	Chlorate by IC	ND	100	96.4	ug/L	96	(80-120)	15	0.94
QC Ref# 837297 - 1,2,3-Trichloropropane (SIM) by CASRL 524M-TCP						**Analysis Date: 05/07/2015**			
DUP_201505050153	1,2,3-Trichloropropane	0.0343	0.005	0.0323	ug/L		(0-20)	20	5.9
DUP_201505060552	1,2,3-Trichloropropane	ND	0.005	ND	ug/L		(0-20)		
LCS1	1,2,3-Trichloropropane		0.01	0.0107	ug/L	107	(80-120)		
LCS2	1,2,3-Trichloropropane		0.01	0.0106	ug/L	106	(80-120)	20	0.94
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.005	0.00577	ug/L	115	(50-150)		
DUP_201505050153	Toluene-d8 (S)		130	98.6	%	99	(70-130)		
DUP_201505060552	Toluene-d8 (S)		130	93.4	%	93	(70-130)		
LCS1	Toluene-d8 (S)		130	103	%	103	(70-130)		
LCS2	Toluene-d8 (S)		130	95.8	%	96	(70-130)		
MBLK	Toluene-d8 (S)			95.8	%	96	(70-130)		
MBLK	Toluene-d8 (S)			99.8	%	100	(70-130)		
MRL_CHK	Toluene-d8 (S)		130	97.8	%	98	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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PROJECT: **531306**

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** - Not Requested

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Date: 05-06-2015
EMAX Batch No.: 15D163

Attn: Jackie Contreras

Eurofins Eaton Analytical
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Subject: Laboratory Report
Project: 531306

Enclosed is the Laboratory report for samples received on 04/23/15.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
201504220716	D163-01	04/22/15	WATER	NITROAROMATICS & NITRAMINES

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

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Submittal Form & Purchase Order 99-34656 15D163

Date: 4/23/2015

REPORTING REQUIRMENTS:** ***Do Not Combine Reports with any other samples submitted under different Folder Numbers!
Report & Invoice must have the Folder # **531306** Sub PO# **99-34656** and Job # **1000014**

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Ship To:
EMAX Laboratories, Inc.
1835 W. 205th St.

Torrance, CA 90501

Phone: 310-618-8889 Fax: 310-618-0818

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified State Certification # & Exp Date for requested tests + matrix.

Samples from: **CALIFORNIA**

Folder #:	Report Due:	Sub PO #:
531306	05/07/2015	99-34656

JLS	Use Lab Order # for ID	*Client Sample ID for reference only*	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
	201504220716	MW-17-3		04/22/15 1140	DW		
1 EPA 8330	@8330EDD Emax		@8330EDD Emax				

Relinquished by: Sample Control Date _____ Time _____

Received by: _____ Date _____ Time _____

Relinquished by: Sample Control Date _____ Time _____

Received by: [signature] Date 4/23/15 Time 14:05

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

Temp = 1.6°C

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN 15D1163
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Cecilia Chavez
☐ EMAX Courier ☑ Client Delivery		Date 04-23-15 Time 1405

COC INSPECTION

☑ Client Name	☑ Client PM/FC	☐ Sampler Name	☑ Sampling Date/Time	☑ Sample ID	☑ Matrix
☑ Address	☐ Tel # / Fax #	☐ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
Safety Issues (if any)	☑ High concentrations expected	☐ From Superfund Site	☐ Rad screening required		

Note: COC not relinquished - was taped inside cooler

PACKAGING INSPECTION

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact (tape)	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 1.6 °C	☐ Cooler 2 _____ °C	☐ Cooler 3 _____ °C	☐ Cooler 4 _____ °C	☐ Cooler 5 _____ °C
	☐ Cooler 6 _____ °C	☐ Cooler 7 _____ °C	☐ Cooler 8 _____ °C	☐ Cooler 9 _____ °C	☐ Cooler 10 _____ °C
Thermometer:	*A - S/N* _____	FM 1/20/15 *B - S/N* 140252070	*C - S/N* 140252067	*D - S/N* _____	

Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.**

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
			ML 4/23/15	AB 4/24/15

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

☐ **Continue to next page.**

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in _____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in _____	D16	Preservation not indicated in _____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in _____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	_____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	_____
D10	No initial/date on corrections in COC/label	D22	_____	R10	_____
D11	Container count mismatch COC vs received	D23	_____	R11	_____
D12	Container size mismatch COC vs received	D24	_____	R12	_____

REVIEWS:

Sample Labeling _____ **Date** 4-23-15

SRF _____ **Date** 4/23/15

PM _____ **Date** 4/24/15

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

531306

METHOD 8330
EXPLOSIVES

SDG#: 15D163

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 531306

SDG : 15D163

METHOD 8330
EXPLOSIVES

One (1) water sample was received on 04/23/15 to be analyzed for Explosives in accordance with Method 8330 and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. EXD017WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. EXD017WL/EXD017WC - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : EUROFINS EATON ANALYTICAL
Project : 531306

SDG NO. : 15D163
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXD017WB	1	NA	04/29/1516:17	04/23/1517:06	XD27091A	XD27090A	EXD017W	Method Blank
LCS1W	EXD017WL	1	NA	04/29/1516:52	04/23/1517:06	XD27092A	XD27090A	EXD017W	Lab Control Sample (LCS)
LCD1W	EXD017WC	1	NA	04/29/1517:26	04/23/1517:06	XD27093A	XD27090A	EXD017W	LCS Duplicate
201504220716	D163-01	1	NA	04/29/1519:43	04/23/1517:06	XD27097A	XD27090A	EXD017W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/22/15
Project	: 531306	Date Received:	04/23/15
Batch No.	: 15D163	Date Extracted:	04/23/15 17:06
Sample ID:	201504220716	Date Analyzed:	04/29/15 19:43
Lab Samp ID:	D163-01	Dilution Factor:	1
Lab File ID:	XD27097A	Matrix	: WATER
Ext Btch ID:	EXD017W	% Moisture	: NA
Calib. Ref.:	XD27090A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.00	4.000	75.0	30-160

Note: All positive results are confirmed by Biphenyl column

QC SUMMARIES

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	NA
Project	: 531306	Date Received:	04/23/15
Batch No.	: 15D163	Date Extracted:	04/23/15 17:06
Sample ID:	MBLK1W	Date Analyzed:	04/29/15 16:17
Lab Samp ID:	EXD017WB	Dilution Factor:	1
Lab File ID:	XD27091A	Matrix :	WATER
Ext Btch ID:	EXD017W	% Moisture :	NA
Calib. Ref.:	XD27090A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.50	4.000	87.4	70-140

Note: All positive results are confirmed by Biphenyl column

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 531306
BATCH NO.: 15D163
METHOD: METHOD 8330

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	EXD017WB	EXD017WL	EXD017WC		
LAB FILE ID:	XD27091A	XD27092A	XD27093A		
DATE EXTRACTED:	04/23/1517:06	04/23/1517:06	04/23/1517:06	DATE COLLECTED:	NA
DATE ANALYZED:	04/29/1516:17	04/29/1516:52	04/29/1517:26	DATE RECEIVED:	04/23/15
PREP. BATCH:	EXD017W	EXD017W	EXD017W		
CALIB. REF:	XD27090A	XD27090A	XD27090A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
HMX	ND	4.00	3.13	78	4.00	2.96	74	6	60-130	30
RDX	ND	4.00	3.08	77	4.00	2.75	69	11	60-130	30
1,3,5-TNB	ND	4.00	3.61	90	4.00	2.86	72	23	30-130	30
1,3-DNB	ND	4.00	3.40	85	4.00	2.92	73	15	60-130	30
Tetryl	ND	4.00	3.56	89	4.00	2.93	73	19	70-130	30
Nitrobenzene	ND	4.00	2.97	74	4.00	2.87	72	3	60-130	30
2,4,6-TNT	ND	4.00	3.67	92	4.00	2.83	71	26	70-130	30
4-AM-2,6-DNT	ND	4.00	2.92	73	4.00	2.90	72	1	70-130	30
2-AM-4,6-DNT	ND	4.00	3.48	87	4.00	2.98	75	15	70-130	30
2,6-DNT	ND	4.00	3.55	89	4.00	2.99	75	17	70-130	30
2,4-DNT	ND	4.00	3.69	92	4.00	3.00	75	21	70-130	30
2-Nitrotoluene	ND	4.00	3.24	81	4.00	2.89	72	11	70-130	30
3-Nitrotoluene	ND	4.00	3.40	85	4.00	3.18	79	7	70-130	30
4-Nitrotoluene	ND	4.00	3.63	91	4.00	3.27	82	10	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
3,4-Dinitrotoluene	4.00	3.64	91	4.00	3.26	82	70-140

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

ORELAP 4034

AT-1807

Laboratory Report

for

Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109
Attention: David Conner

Date of Issue
05/15/2015

EUROFINS EATON ANALYTICAL

DST: David S Tripp

Project Manager

Report: 531627
Project: TIDEWATER
Group: 2Q15 JPL Triannual
PO#: Sampling

* Accredited in accordance with TNI 2009 and ISO/IEC 17025:2005.
* Laboratory certifies that the test results meet all **TNI 2009 and ISO/IEC 17025:2005** requirements unless noted under the individual analysis.
* Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.
* Test results relate only to the sample(s) tested.

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STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	**Mississippi**	Certified
Alaska	CA00006	**Montana**	Cert 0035
Arizona	AZ0778	**Nebraska**	Certified
Arkansas	Certified	**Nevada**	CA00006-2014-1
California-Monrovia-ELAP	2813	**New Hampshire ***	2959
California-Colton- ELAP	2812	**New Jersey ***	CA 008
California-Folsom- ELAP	2820	**New Mexico**	Certified
Colorado	Certified	**New York ***	11320
Connecticut	PH-0107	**North Carolina**	06701
Delaware	CA 006	**North Dakota**	R-009
Florida *	E871024	**Oregon (Primary AB) ***	**ORELAP 4034**
Georgia	947	**Pennsylvania ***	68-565
Guam	14-003r	**Rhode Island**	LAO00326
Hawaii	Certified	**South Carolina**	87016
Idaho	Certified	**South Dakota**	Certified
Illinois *	200033	**Tennessee**	TN02839
Indiana	C-CA-01	**Texas ***	T104704230-14-7
Kansas *	E-10268	**Utah ***	CA000062014-7
Kentucky	90107	**Vermont**	VT0114
Louisiana *	LA140009	**Virginia ***	460260
Maine	CA0006	**Washington**	C838
Maryland	224	**West Virginia**	9943 C
Commonwealth of Northern Marianas Is.	MP0004	**Wisconsin**	998316660
Massachusetts	M-CA006	**Wyoming**	8TMS-L
Michigan	9906	**EPA Region 5**	Certified
Los Angeles County Sanitation Districts	10264		

* NELAP/TNI Recognized Accreditation Bodies

The tests listed below are accredited and meet the requirements of ISO 17025 as verified by the ANSI-ASQ National Accreditation Board/ACLASS.
Refer to Certificate and scope of accreditation (AT 1807) found at: http://www.eatonanalytical.com

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
1,4-Dioxane	EPA 522	x	x	
2,3,7,8-TCDD	Modified EPA 1613B	x	x	
Acrylamide	In House Method	x	x	
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H (18th)		x	x
Anions and DBPs by IC	EPA 300.0	x	x	x
Anions and DBPs by IC	EPA 300.1	x	x	
Asbestos	EPA 100.2	x		
Bicarbonate Alkalinity as HCO3	SM 2330B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method	x	x	
Carbamates	EPA 531.2	x	x	
Carbonate as CO3	SM 2330B	x	x	x
Carbonyls	EPA 556	x	x	
COD	EPA 410.4 / SM 5220D			x
Chloramines	SM 4500-CL G	x	x	x
Chlorinated Acids	EPA 515.4	x	x	
Chlorinated Acids	EPA 555	x	x	
Chlorine Dioxide	SM 4500-CLO2 D	x	x	
Chlorine -Total/Free/ Combined Residual	SM 4500-Cl G	x	x	x
Conductivity	EPA 120.1			x
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	x	x	
Cyanide, Amenable	SM 4500-CN G	x		x
Cyanide, Free	SM 4500CN F	x	x	x
Cyanide, Total	EPA 335.4	x	x	x
Cyanogen Chloride (screen)	In House Method	x	x	
Diquat and Paraquat	EPA 549.2	x	x	
DBP/HAA	SM 6251B	x	x	
Dissolved Oxygen	SM 4500-O G		x	x
E. Coli	(MTF/EC+MUG)	x		
E. Coli	CFR 141.21(f)(6)(i)		x	x
E. Coli	SM 9223			x
E. Coli (Enumeration)	SM 9221B.1/ SM 9221F	x	x	
E. Coli (Enumeration)	SM 9223B	x	x	
EDB/DCBP	EPA 504.1	x		
EDB/DBCP and DBP	EPA 551.1	x	x	
EDTA and NTA	In House Method	x	x	
Endothall	EPA 548.1	x	x	
Enterococci	SM 9230B	x		x
Fecal Coliform	SM 9221 E (MTF/EC)	x		
Fecal Coliform	SM 9221C, E (MTF/EC)			x
Fecal Coliform (Enumeration)	SM 9221E (MTF/EC)	x	x	
Fecal Coliform with Chlorine Present	SM 9221E			x
Fecal Streptococci	SM 9230B	x		x
Fluoride	SM 4500-F C	x	x	x
Glyphosate	EPA 547	x	x	
Gross Alpha/Beta	EPA 900.0	x	x	x
HAAs/ Dalapon	EPA 552.3	x	x	
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method	x	x	
Heterotrophic Bacteria	SM 9215 B	x	x	
Hexavalent Chromium	EPA 218.6	x	x	x
Hexavalent Chromium	EPA 218.7	x	x	
Hexavalent Chromium	SM 3500-Cr B or C (20th)			x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
Hormones	EPA 539	x	x	
Hydroxide as OH Calc.	SM 2330B	x	x	
Kjeldahl Nitrogen	EPA 351.2			x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA	x	x	
NDMA	EPA 521	x	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x	x
OCL, Pesticides/PCB	EPA 505	x	x	
Ortho Phosphate	EPA 365.1	x	x	
Ortho Phosphate and Total Phosphorous	EPA 365.1/SM 4500-P E			x
Ortho Phosphorous	SM 4500P E	x	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	x	
Perchlorate	EPA 331.0	x	x	
Perchlorate	EPA 314.0	x	x	
Perfluorinated Alkyl Acids	EPA 537	x	x	
pH	EPA 150.1	x		
pH	SM 4500-H+B	x	x	x
Phenylurea Pesticides/ Herbicides	In House Method	x	x	
Pseudomonas	IDEXX Pseudalert	x	x	
Radium-226	RA-226 GA	x	x	
Radium-228	RA-228 GA	x	x	
Radon-222	SM 7500RN	x	x	
Residue, Filterable	SM 2540C	x	x	x
Residue, Non-filterable	SM 2540D			x
Residue, Total	SM 2540B		x	x
Residue, Volatile	EPA 160.4			x
Semi-VOC	EPA 525.2	x	x	
Semi-VOC	EPA 625	x	x	x
Silica	SM 4500-Si D	x	x	x
Silica	SM 4500-SiO2 C	x		x
Sulfide	SM 4500-$S^{=}$ D			x
Sulfite	SM 4500-SO^{3}B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x	x	
Total Coliform	SM 9221 A, B	x	x	
Total Coliform (Enumeration)	SM 9221 A, B, C	x	x	
Total Coliform / E. coli	Colisure	x	x	
Total Coliform	SM 9221B			x
Total Coliform with Chlorine Present	SM 9221B			x
Total Coliform / E.coli	SM 9223	x	x	
TOC	SM 5310C		x	x
TOC/DOC	SM 5310C	x	x	
TOX	SM 5320B			x
Total Phenols	EPA 420.1			x
Total Phenols	EPA 420.4	x	x	x
Total Phosphorous	SM 4500 P F			x
Turbidity	EPA 180.1	x	x	x
Turbidity	SM 2130B	x		x
Uranium by ICP/MS	EPA 200.8	x	x	
UV 254	SM 5910B	x		
VOC	EPA 524.2/EPA 524.3	x	x	
VOC	EPA 624	x	x	x
VOC	EPA SW 846 8260	x	x	
VOC	In House Method	x	x	
Yeast and Mold	SM 9610	x	x	

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Acknowledgement of Samples Received

Addr: **Tidewater, Inc.**
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena91109
Attn: David Conner
Phone: 619-726-7311

Client ID: JPL-CA
Folder #: 531627
Project: TIDEWATER
Sample Group: 2Q15 JPL Triannual Sampling

Project Manager: David S Tripp
Phone: (626) 386-1158
PO #: 1213-000-05

The following samples were received from you on **April 24, 2015** at **1725**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
201504240402	MW-19-2	04/24/2015 1205

@ANIONS48	@8330EDD EMAX	@DIOXANE
@ML521_SPE8	@TCP-524	@VOASDWA
@VOA-TBA	Chlorate by IC	Fluoride
Hexavalent chromium(Dissolved)		

Test Description

@ANIONS48 -- Nitrate, Nitrite by EPA 300.0

@8330EDD EMAX -- @8330EDD Emax

@DIOXANE -- 1,4-Dioxane

@ML521_SPE8 -- Nitrosamines by GCMS

@TCP-524 -- 1,2,3-Trichloropropane (SIM)

@VOASDWA -- Volatile Organics by GCMS

@VOA-TBA -- TBA by EPA 524.2 Modified

750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (626) 386-1101 http://www.EatonAnalytical.com

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CHAIN OF CUSTODY RECORD

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY: S3l627

LOGIN COMMENTS: 2.2-0.2 = 2.0 Gun# 460A

SAMPLES CHECKED AGAINST COC BY: Weena

SAMPLES LOGGED IN BY: MS

SAMPLES REC'D DAY OF COLLECTION? ☑ (check for yes)

SAMPLE TEMP RECEIVED AT:

☐ Colton / No. California / Arizona _____ °C (Compliance: 4 ± 2 °C)

☑ Monrovia 2.0 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen ___ Partially Frozen ___ Thawed ___ Wet Ice ✓ No Ice ___

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: JPL-CA

PROJECT CODE: TIDEWATER bottle order

EEA CLIENT CODE:

COC ID:

SAMPLE GROUP: Blaine Tech

TAT requested: rush by adv notice only STD ☒ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)
REGULATION INVOLVED: _____

Type of samples (circle one): **ROUTINE SPECIAL CONFIRMATION** (eg. SDWA, Phase V, NPDES, FDA,...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☒ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	SAMPLER COMMENTS
4-24-15	1205	MW-19-2		RGW			

*** MATRIX TYPES:** **RSW** = Raw Surface Water, **RGW** = Raw Ground Water, **CFW** = Chlor(am)inated Finished Water, **FW** = Other Finished Water, **SEAW** = Sea Water, **WW** = Waste Water, **BW** = Bottled Water, **SW** = Storm Water, **SO** = Soil, **SL** = Sludge, **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	Andy Wolff	Andy Wolff	Blaine Tech/Area Supervisor	4-24-15	1205
RELINQUISHED BY:	Andy Wolff	"	"	4-24-15	1450
RECEIVED BY:	[illegible]	[illegible]	EEA	4-24-15	4:[illegible]
RELINQUISHED BY:	[illegible]	[illegible]	EEA	4-24-15	
RECEIVED BY:	[illegible]	Weena Tanawarawid	EEA	4-24-15	1725

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formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
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(626) 386-1100 FAX (626) 386-1101

Kit Order for Jet Propulsion Laboratory

David S Tripp is your Eurofins Eaton Analytical Project Manager

Note: Sampler Please return this paper with your samples

Kit #: 110244
Created By: ADT
Deliver By: 04/10/2015
STG: Bottle Orders
Ice Type: W

Client ID: JPL-CA
Project Code: TIDEWATER Bottle Orders
Group Name: 2Q15 JPL Triannual Sampling
PO#/JOB#: 1213-000-05

Ship Sample Kits to
Jet Propulsion Laboratory
20735 Belshaw Avenue
Carson, CA 90746

Attn: Robert Sunjara
Phone: 310-885-4455 x 115

Send Report to
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

Billing Address
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

# of Sample	Tests	Bottles - Qty for each sample, type & preservative if a	UN DOT #
7	@8330EDD EMAX	2 1L amber glass 1ml thio (8%)	
7	@ANIONS48, Fluoride	1 125ml poly no preservative	
7	@DIOXANE	3 125ml amber glass 6.25 Sulfite +125 mg Bisulfite	
7	@ML521_SPE8	3 500ml amber glass 40-50 mg Na Thiosulfate	
7	@VOASDWA	~~3 40ml amber glass vial 4drops 6N HCL (36%)~~	~~UN1789~~
7	@VOA-TBA	4 40ml amber glass vial TBA_4 drops 1:1 HCL	UN1789
7	Chlorate by IC	1 60mL poly 0.6mL 1% EDA solution	
7	Hexavalent Chromium (Dissolved)	1 125ml poly 1.25 ml NH4SO4/NH4OH buffer	

Comments

One set per cooler

Code	Status	Date Shipped	Via	Tracking #	# of Coolers	Prepared By

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
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1 800 566 LABS (1 800 566 5227)

Laboratory Hits
Report: 531627

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/24/2015 1725

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201504240402	**MW-19-2**				
05/06/2015 22:12	Chlorate by IC		530		ug/L	10
05/01/2015 18:58	Chloroform (Trichloromethane)		1.0		ug/L	0.5
05/06/2015 13:01	Fluoride		0.22	4	mg/L	0.05
04/28/2015 13:12	Hexavalent chromium(Dissolved)		0.61		ug/L	0.02
04/24/2015 23:06	Nitrate as Nitrogen by IC		13	10	mg/L	0.5
04/24/2015 23:06	Nitrate as NO3 (calc)		58	45	mg/L	2.2
05/02/2015 18:41	N-Nitrosomorpholine		3.5		ng/l	2
05/01/2015 18:58	Tetrachloroethylene (PCE)		0.70	5	ug/L	0.5
05/01/2015 18:58	Total THM		1.0	80	ug/L	0.5
05/01/2015 18:58	Trichloroethylene (TCE)		1.1	5	ug/L	0.5

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data
Report: 531627

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/24/2015 1725

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
MW-19-2 (201504240402)						**Sampled on 04/24/2015 1205**		
		EPA 522 - 1,4-Dioxane						
4/27/2015	04/29/2015 1:05	835464	(EPA 522)	1,4-Dioxane	ND	ug/L	1	1
4/27/2015	04/29/2015 1:05	835464	(EPA 522)	Dioxane-d8	99	%		1
		EPA 521 - Nitrosamines by GCMS						
4/30/2015	05/02/2015 18:41	836624	(EPA 521)	N-Nitrosodibutylamine (NDBA)	ND	ng/L	2	1
4/30/2015	05/02/2015 18:41	836624	(EPA 521)	N-Nitrosodiethylamine (NDEA)	ND	ng/L	2	1
4/30/2015	05/02/2015 18:41	836624	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
4/30/2015	05/02/2015 18:41	836624	(EPA 521)	N-Nitrosodi-n-propylamine (NDPA)	ND	ng/L	2	1
4/30/2015	05/02/2015 18:41	836624	(EPA 521)	N-Nitrosomethylethylamine (NMEA)	ND	ng/L	2	1
4/30/2015	05/02/2015 18:41	836624	(EPA 521)	N-Nitrosomorpholine	3.5	ng/l	2	1
4/30/2015	05/02/2015 18:41	836624	(EPA 521)	N-Nitrosopiperidine (NPIP)	ND	ng/L	2	1
4/30/2015	05/02/2015 18:41	836624	(EPA 521)	N-Nitrosopyrollidine (NPYR)	ND	ng/L	2	1
4/30/2015	05/02/2015 18:41	836624	(EPA 521)	NDMA-D6	96	%		1
		EPA 218.6 - Hexavalent chromium(Dissolved)						
	04/28/2015 13:12	835313	(EPA 218.6)	Hexavalent chromium(Dissolved)	0.61	ug/L	0.02	1
		EPA 300.0 - Nitrate, Nitrite by EPA 300.0						
	04/24/2015 23:06	834879	(EPA 300.0)	Nitrate as Nitrogen by IC	13	mg/L	0.5	5
	04/24/2015 23:06	834879	(EPA 300.0)	Nitrate as NO3 (calc)	58	mg/L	2.2	5
		EPA 300.0 - Disinfection ByProducts by 300.0						
	05/06/2015 22:12	837153	(EPA 300.0)	Chlorate by IC	530	ug/L	10	1
		EPA 8330 - @8330EDD Emax						
	04/29/2015 23:42		(EPA 8330)	1,3,5-TNB	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	1,3-DNB	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	2,4,6-TNT	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	2,4-DNT	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	2,6-DNT	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	2-AM-4,6DNT	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	2-Nitrotoluene	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	3-Nitrotoluene	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	4-AM-2,6-DNT	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	4-Nitrotoluene	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	HMX	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	Nitrobenzene	ND	ug/L	0.4	1
	04/29/2015 23:42		(EPA 8330)	RDX	ND	ug/L	0.4	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data
Report: 531627

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/24/2015 1725

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	04/29/2015	23:42		(EPA 8330)	Tetryl	ND	ug/L	0.4	1
	04/29/2015	23:42		(EPA 8330)	3,4-Dinitrotoluene	90	%		1
		EPA 524.2 - Volatile Organics by GCMS							
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Benzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Bromobenzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Bromoethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Bromoform	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Carbon disulfide	ND (LK)	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Chloroethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Chloroform (Trichloromethane)	1.0	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data
Report: 531627

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/24/2015 1725

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Dibromomethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Dichloromethane	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Naphthalene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	o-Xylene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Styrene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Tetrachloroethylene (PCE)	0.70	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Toluene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Total THM	1.0	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Total xylenes	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Trichloroethylene (TCE)	1.1	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data
Report: 531627

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
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Pasadena, 91109

Samples Received on:
04/24/2015 1725

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.5	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.3	1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	1,2-Dichloroethane-d4	104	%		1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	4-Bromofluorobenzene	103	%		1
5/1/2015	05/01/2015	18:58	836174	(EPA 524.2)	Toluene-d8	99	%		1
		CASRL 524M-TCP - 1,2,3-Trichloropropane (SIM)							
5/7/2015	05/07/2015	15:42	837297	(CASRL 524M-TCP)	1,2,3-Trichloropropane	ND	ug/L	0.005	1
5/7/2015	05/07/2015	15:42	837297	(CASRL 524M-TCP)	Toluene-d8	98	%		1
		EPA 524.2 SIM - TBA by EPA 524.2 Modified							
4/30/2015	04/30/2015	16:25	835946	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2	1
4/30/2015	04/30/2015	16:25	835946	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	102	%		1
4/30/2015	04/30/2015	16:25	835946	(EPA 524.2 SIM)	4-Bromofluorobenzene	90	%		1
4/30/2015	04/30/2015	16:25	835946	(EPA 524.2 SIM)	Toluene-d8	94	%		1
		SM 4500F-C - Fluoride							
	05/06/2015	13:01	836736	(SM 4500F-C)	Fluoride	0.22	mg/L	0.05	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Comments
Report: 531627

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Folder Comments

Analytical results for 8330 are submitted by Emax Laboratories, Inc. Torrance, CA, CA
Certification No. 02116CA

Flags Legend:

LK - The associated blank spike recovery was above method acceptance limits. This target analyte was not detected in the sample.

The Comments Report may be blank if there are no comments for this report.

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Tidewater, Inc.

QC Ref # 834879 - Nitrate, Nitrite by EPA 300.0 **Analysis Date: 04/24/2015**
201504240402 MW-19-2 Analyzed by: CYP

QC Ref # 835313 - Hexavalent chromium(Dissolved) **Analysis Date: 04/28/2015**
201504240402 MW-19-2 Analyzed by: TLH

QC Ref # 835464 - 1,4-Dioxane **Analysis Date: 04/29/2015**
201504240402 MW-19-2 Analyzed by: JYH

QC Ref # 835946 - TBA by EPA 524.2 Modified **Analysis Date: 04/30/2015**
201504240402 MW-19-2 Analyzed by: KCP

QC Ref # 836174 - Volatile Organics by GCMS **Analysis Date: 05/01/2015**
201504240402 MW-19-2 Analyzed by: KCP

QC Ref # 836624 - Nitrosamines by GCMS **Analysis Date: 05/02/2015**
201504240402 MW-19-2 Analyzed by: PAC

QC Ref # 836736 - Fluoride **Analysis Date: 05/06/2015**
201504240402 MW-19-2 Analyzed by: MIA8

QC Ref # 837153 - Disinfection ByProducts by 300.0 **Analysis Date: 05/06/2015**
201504240402 MW-19-2 Analyzed by: NJR

QC Ref # 837297 - 1,2,3-Trichloropropane (SIM) **Analysis Date: 05/07/2015**
201504240402 MW-19-2 Analyzed by: KAM

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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 834879 - Nitrate, Nitrite by EPA 300.0 by EPA 300.0						**Analysis Date: 04/24/2015**			
LCS1	Nitrate as Nitrogen by IC		2.5	2.47	mg/L	99	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.48	mg/L	99	(90-110)	20	0.40
MBLK	Nitrate as Nitrogen by IC			<0.10	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0465	mg/L	93	(50-150)		
MS_201504160272	Nitrate as Nitrogen by IC	ND	1.3	1.25	mg/L	99	(80-120)		
MS_201504300291	Nitrate as Nitrogen by IC	ND	1.3	1.25	mg/L	100	(80-120)		
MSD_201504300291	Nitrate as Nitrogen by IC	ND	1.3	1.17	mg/L	94	(80-120)	20	6.6
MSD_201504160272	Nitrate as Nitrogen by IC	ND	1.3	1.25	mg/L	100	(80-120)	20	0.0
QC Ref# 835313 - Hexavalent chromium(Dissolved) by EPA 218.6						**Analysis Date: 04/28/2015**			
LCS1	Hexavalent chromium(Dissolved)		2	2.00	ug/L	100	(90-110)		
LCS2	Hexavalent chromium(Dissolved)		2	1.99	ug/L	99	(90-110)		
MBLK	Hexavalent chromium(Dissolved)			<0.020	ug/L				
MRL_CHK	Hexavalent chromium(Dissolved)		0.02	0.0174	ug/L	87	(50-150)		
MS_201504240082	Hexavalent chromium(Dissolved)	11	2	13.0	ug/L	104	(90-110)		
MS_201504210049	Hexavalent chromium(Dissolved)	ND	2	1.76	ug/L	**88**	(90-110)		
MSD_201504210049	Hexavalent chromium(Dissolved)	ND	2	1.44	ug/L	**72**	(90-110)	20	20
MSD_201504240082	Hexavalent chromium(Dissolved)	11	2	13.1	ug/L	107	(90-110)	20	0.77
QC Ref# 835464 - 1,4-Dioxane by EPA 522						**Analysis Date: 04/28/2015**			
LCS1	Dioxane		20	22.1	ug/L	110	(70-130)		
MBLK	Dioxane			<1	ug/L				
MRLLW	Dioxane		0.07	0.0650	ug/L	93	(50-150)		
MS_201504240022	Dioxane	ND	20	20.9	ug/L	105	(70-130)		
MSD_201504240022	Dioxane	ND	20	19.2	ug/L	96	(30-130)	20	8.5
LCS1	Dioxane-d8 (S)			109	%	109	(70-130)		
MBLK	Dioxane-d8 (S)			97.1	%	97	(70-130)		
MRLLW	Dioxane-d8 (S)			99.8	%	100	(70-130)		
MS_201504240022	Dioxane-d8 (S)			102	%	102	(70-130)		
MSD_201504240022	Dioxane-d8 (S)			96.8	%	97	(70-130)		
QC Ref# 835946 - TBA by EPA 524.2 Modified by EPA 524.2 SIM						**Analysis Date: 04/30/2015**			
LCS1	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			108	%	108	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
LCS1	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS2	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Report: 531627

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS1	t-Butyl Alcohol		5	4.57	ug/L	91	(70-130)		
LCS2	t-Butyl Alcohol		5	4.50	ug/L	90	(70-130)	20	1.5
MBLK	t-Butyl Alcohol			<1	ug/L				
MRL_CHK	t-Butyl Alcohol		2	2.44	ug/L	122	(50-150)		
LCS1	Toluene-d8 (S)			96.0	%	96	(70-130)		
LCS2	Toluene-d8 (S)			96.0	%	96	(70-130)		
MBLK	Toluene-d8 (S)			98.0	%	98	(70-130)		
MRL_CHK	Toluene-d8 (S)			96.0	%	96	(70-130)		
QC Ref# 836174 - Volatile Organics by GCMS by EPA 524.2						**Analysis Date: 05/01/2015**			
LCS1	1,1,1,2-Tetrachloroethane		5	5.29	ug/L	106	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	5.07	ug/L	101	(70-130)	20	4.3
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,1,2-Tetrachloroethane		0.5	0.520	ug/L	104	(50-150)		
LCS1	1,1,1-Trichloroethane		5	4.58	ug/L	92	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.28	ug/L	86	(70-130)	20	6.8
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,1-Trichloroethane		0.5	0.420	ug/L	84	(50-150)		
LCS1	1,1,2,2-Tetrachloroethane		5	5.00	ug/L	100	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	4.87	ug/L	97	(70-130)	20	2.6
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,2,2-Tetrachloroethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,1,2-Trichloroethane		5	4.76	ug/L	95	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.70	ug/L	94	(70-130)	20	1.3
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.460	ug/L	92	(50-150)		
LCS1	1,1-Dichloroethane		5	4.76	ug/L	95	(70-130)		
LCS2	1,1-Dichloroethane		5	4.59	ug/L	92	(70-130)	20	3.6
MBLK	1,1-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethane		0.5	0.500	ug/L	100	(50-150)		
LCS1	1,1-Dichloroethylene		5	4.39	ug/L	88	(70-130)		
LCS2	1,1-Dichloroethylene		5	4.21	ug/L	84	(70-130)	20	4.2
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.500	ug/L	100	(50-150)		
LCS1	1,1-Dichloropropene		5	4.53	ug/L	91	(70-130)		
LCS2	1,1-Dichloropropene		5	4.35	ug/L	87	(70-130)	20	4.0
MBLK	1,1-Dichloropropene			<0.5	ug/L				

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Report: 531627

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	1,1-Dichloropropene		0.5	0.470	ug/L	94	(50-150)		
LCS1	1,2,3-Trichlorobenzene		5	5.75	ug/L	115	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	5.34	ug/L	107	(70-130)	20	7.4
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,3-Trichlorobenzene		0.5	0.550	ug/L	110	(50-150)		
LCS1	1,2,3-Trichloropropane		5	4.58	ug/L	92	(70-130)		
LCS2	1,2,3-Trichloropropane		5	4.53	ug/L	91	(70-130)	20	1.1
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.5	0.500	ug/L	100	(50-150)		
LCS1	1,2,4-Trichlorobenzene		5	5.36	ug/L	107	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	5.12	ug/L	102	(70-130)	20	4.6
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.520	ug/L	104	(50-150)		
LCS1	1,2,4-Trimethylbenzene		5	4.66	ug/L	93	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	4.38	ug/L	88	(70-130)	20	6.2
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trimethylbenzene		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,2-Dichloroethane		5	4.96	ug/L	99	(70-130)		
LCS2	1,2-Dichloroethane		5	4.88	ug/L	98	(70-130)	20	1.6
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.460	ug/L	92	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)			98.2	%	98	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			97.8	%	98	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			99.4	%	99	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)			103	%	103	(70-130)		
LCS1	1,2-Dichloropropane		5	5.01	ug/L	100	(70-130)		
LCS2	1,2-Dichloropropane		5	4.76	ug/L	95	(70-130)	20	5.1
MBLK	1,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,2-Dichloropropane		0.5	0.460	ug/L	92	(50-150)		
LCS1	1,3,5-Trimethylbenzene		5	4.43	ug/L	89	(70-130)		
LCS2	1,3,5-Trimethylbenzene		5	4.18	ug/L	84	(70-130)	20	5.8
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,3,5-Trimethylbenzene		0.5	0.450	ug/L	90	(50-150)		
LCS1	1,3-Dichloropropane		5	4.80	ug/L	96	(70-130)		
LCS2	1,3-Dichloropropane		5	4.66	ug/L	93	(70-130)	20	3.0
MBLK	1,3-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,3-Dichloropropane		0.5	0.490	ug/L	98	(50-150)		

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	2,2-Dichloropropane		5	3.95	ug/L	79	(70-130)		
LCS2	2,2-Dichloropropane		5	3.66	ug/L	73	(70-130)	20	7.6
MBLK	2,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	2,2-Dichloropropane		0.5	0.450	ug/L	90	(50-150)		
LCS1	2-Butanone (MEK)		50	49.9	ug/L	100	(70-130)		
LCS2	2-Butanone (MEK)		50	47.9	ug/L	96	(70-130)	20	4.1
MBLK	2-Butanone (MEK)			<5.0	ug/L				
MRL_CHK	2-Butanone (MEK)		5	5.76	ug/L	115	(50-150)		
LCS1	4-Bromofluorobenzene (S)			98.8	%	99	(70-130)		
LCS2	4-Bromofluorobenzene (S)			96.2	%	96	(70-130)		
MBLK	4-Bromofluorobenzene (S)			105	%	105	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			103	%	103	(70-130)		
MRLLW	4-Bromofluorobenzene (S)			105	%	105	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	55.9	ug/L	112	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	54.4	ug/L	109	(70-130)	20	2.7
MBLK	4-Methyl-2-Pentanone (MIBK)			<5	ug/L				
MRL_CHK	4-Methyl-2-Pentanone (MIBK)		5	4.86	ug/L	97	(50-150)		
LCS1	Benzene		5	5.02	ug/L	100	(70-130)		
LCS2	Benzene		5	4.74	ug/L	95	(70-130)	20	5.7
MBLK	Benzene			<0.5	ug/L				
MRL_CHK	Benzene		0.5	0.520	ug/L	104	(50-150)		
LCS1	Bromobenzene		5	5.00	ug/L	100	(70-130)		
LCS2	Bromobenzene		5	4.92	ug/L	98	(70-130)	20	1.6
MBLK	Bromobenzene			<0.5	ug/L				
MRL_CHK	Bromobenzene		0.5	0.470	ug/L	94	(50-150)		
LCS1	Bromochloromethane		5	4.88	ug/L	98	(70-130)		
LCS2	Bromochloromethane		5	4.62	ug/L	92	(70-130)	20	5.5
MBLK	Bromochloromethane			<0.5	ug/L				
MRL_CHK	Bromochloromethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	Bromodichloromethane		5	5.52	ug/L	110	(70-130)		
LCS2	Bromodichloromethane		5	5.13	ug/L	103	(70-130)	20	7.3
MBLK	Bromodichloromethane			<0.5	ug/L				
MRL_CHK	Bromodichloromethane		0.5	0.410	ug/L	82	(50-150)		
LCS1	Bromoethane		5	5.05	ug/L	101	(70-130)		
LCS2	Bromoethane		5	4.59	ug/L	92	(70-130)	20	9.5
MBLK	Bromoethane			<0.5	ug/L				
MRL_CHK	Bromoethane		0.5	0.520	ug/L	104	(50-150)		
LCS1	Bromoform		5	5.52	ug/L	110	(70-130)		

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Bromoform		5	5.49	ug/L	110	(70-130)	20	0.55
MBLK	Bromoform			<0.5	ug/L				
MRL_CHK	Bromoform		0.5	0.370	ug/L	74	(50-150)		
LCS1	Bromomethane (Methyl Bromide)		5	4.95	ug/L	99	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	4.69	ug/L	94	(70-130)	20	5.4
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
MRL_CHK	Bromomethane (Methyl Bromide)		0.5	0.630	ug/L	126	(50-150)		
LCS1	Carbon disulfide		5	6.56	ug/L	**131**	(70-130)		
LCS2	Carbon disulfide		5	6.19	ug/L	124	(70-130)	20	5.8
MBLK	Carbon disulfide			<0.5	ug/L				
MRL_CHK	Carbon disulfide		0.5	0.260	ug/L	52	(50-150)		
LCS1	Carbon Tetrachloride		5	4.46	ug/L	89	(70-130)		
LCS2	Carbon Tetrachloride		5	4.40	ug/L	88	(70-130)	20	1.4
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.400	ug/L	80	(50-150)		
LCS1	Chlorobenzene		5	4.96	ug/L	99	(70-130)		
LCS2	Chlorobenzene		5	4.82	ug/L	96	(70-130)	20	2.9
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.500	ug/L	100	(50-150)		
LCS1	Chlorodibromomethane		5	5.35	ug/L	107	(70-130)		
LCS2	Chlorodibromomethane		5	5.17	ug/L	103	(70-130)	20	3.4
MBLK	Chlorodibromomethane			<0.5	ug/L				
MRL_CHK	Chlorodibromomethane		0.5	0.540	ug/L	108	(50-150)		
LCS1	Chloroethane		5	4.53	ug/L	91	(70-130)		
LCS2	Chloroethane		5	4.30	ug/L	86	(70-130)	20	5.2
MBLK	Chloroethane			<0.5	ug/L				
MRL_CHK	Chloroethane		0.5	0.640	ug/L	128	(50-150)		
LCS1	Chloroform (Trichloromethane)		5	4.82	ug/L	96	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.60	ug/L	92	(70-130)	20	4.7
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
MRL_CHK	Chloroform (Trichloromethane)		0.5	0.590	ug/L	118	(50-150)		
LCS1	Chloromethane(Methyl Chloride)		5	4.66	ug/L	93	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	4.56	ug/L	91	(70-130)	20	2.2
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
MRL_CHK	Chloromethane(Methyl Chloride)		0.5	0.520	ug/L	104	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	4.87	ug/L	97	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	4.56	ug/L	91	(70-130)	20	6.6
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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Laboratory QC
Report: 531627

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.470	ug/L	94	(50-150)		
LCS1	cis-1,3-Dichloropropene		5	5.24	ug/L	105	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	5.01	ug/L	100	(70-130)	20	4.5
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	cis-1,3-Dichloropropene		0.5	0.530	ug/L	106	(50-150)		
LCS1	Dibromomethane		5	4.76	ug/L	95	(70-130)		
LCS2	Dibromomethane		5	4.61	ug/L	92	(70-130)	20	3.2
MBLK	Dibromomethane			<0.5	ug/L				
MRL_CHK	Dibromomethane		0.5	0.470	ug/L	94	(50-150)		
LCS1	Dichlorodifluoromethane		5	4.44	ug/L	89	(70-130)		
LCS2	Dichlorodifluoromethane		5	4.12	ug/L	82	(70-130)	20	7.5
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
MRL_CHK	Dichlorodifluoromethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	Dichloromethane		5	4.87	ug/L	97	(70-130)		
LCS2	Dichloromethane		5	4.63	ug/L	93	(70-130)	20	5.0
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.570	ug/L	114	(50-150)		
LCS1	Di-isopropyl ether		5	4.97	ug/L	99	(70-130)		
LCS2	Di-isopropyl ether		5	4.85	ug/L	97	(70-130)	20	2.4
MBLK	Di-isopropyl ether			<3.0	ug/L				
MRL_CHK	Di-isopropyl ether		0.5	0.520	ug/L	104	(50-150)		
LCS1	Ethyl benzene		5	5.00	ug/L	100	(70-130)		
LCS2	Ethyl benzene		5	4.73	ug/L	95	(70-130)	20	5.5
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	Hexachlorobutadiene		5	5.48	ug/L	110	(70-130)		
LCS2	Hexachlorobutadiene		5	4.87	ug/L	97	(70-130)	20	12
MBLK	Hexachlorobutadiene			<0.5	ug/L				
MRL_CHK	Hexachlorobutadiene		0.5	0.490	ug/L	98	(50-150)		
LCS1	Isopropylbenzene		5	4.74	ug/L	95	(70-130)		
LCS2	Isopropylbenzene		5	4.59	ug/L	92	(70-130)	20	3.2
MBLK	Isopropylbenzene			<0.5	ug/L				
MRL_CHK	Isopropylbenzene		0.5	0.460	ug/L	92	(50-150)		
LCS1	m,p-Xylenes		10	9.55	ug/L	96	(70-130)		
LCS2	m,p-Xylenes		10	9.05	ug/L	91	(70-130)	20	5.4
MBLK	m,p-Xylenes			<0.5	ug/L				
MRL_CHK	m,p-Xylenes		1	0.920	ug/L	92	(50-150)		
MRLLW	m,p-Xylenes		0.5	0.550	ug/L	110	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531627

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	m-Dichlorobenzene (1,3-DCB)		5	5.01	ug/L	100	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	4.91	ug/L	98	(70-130)	20	2.0
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
MRL_CHK	m-Dichlorobenzene (1,3-DCB)		0.5	0.540	ug/L	108	(50-150)		
LCS1	Methyl Tert-butyl ether (MTBE)		5	4.79	ug/L	96	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.72	ug/L	94	(70-130)	20	1.5
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
MRL_CHK	Methyl Tert-butyl ether (MTBE)		0.5	0.500	ug/L	100	(50-150)		
LCS1	Naphthalene		5	5.86	ug/L	117	(70-130)		
LCS2	Naphthalene		5	5.50	ug/L	110	(70-130)	20	6.3
MBLK	Naphthalene			<0.5	ug/L				
MRL_CHK	Naphthalene		0.5	0.460	ug/L	92	(50-150)		
LCS1	n-Butylbenzene		5	5.11	ug/L	102	(70-130)		
LCS2	n-Butylbenzene		5	4.76	ug/L	95	(70-130)	20	7.1
MBLK	n-Butylbenzene			<0.5	ug/L				
MRL_CHK	n-Butylbenzene		0.5	0.440	ug/L	88	(50-150)		
LCS1	n-Propylbenzene		5	4.62	ug/L	92	(70-130)		
LCS2	n-Propylbenzene		5	4.44	ug/L	89	(70-130)	20	4.0
MBLK	n-Propylbenzene			<0.5	ug/L				
MRL_CHK	n-Propylbenzene		0.5	0.460	ug/L	92	(50-150)		
LCS1	o-Chlorotoluene		5	4.98	ug/L	100	(70-130)		
LCS2	o-Chlorotoluene		5	4.86	ug/L	97	(70-130)	20	2.4
MBLK	o-Chlorotoluene			<0.5	ug/L				
MRL_CHK	o-Chlorotoluene		0.5	0.510	ug/L	102	(50-150)		
LCS1	o-Dichlorobenzene (1,2-DCB)		5	4.96	ug/L	99	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	4.82	ug/L	96	(70-130)	20	2.9
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
MRL_CHK	o-Dichlorobenzene (1,2-DCB)		0.5	0.500	ug/L	100	(50-150)		
LCS1	o-Xylene		5	4.75	ug/L	95	(70-130)		
LCS2	o-Xylene		5	4.47	ug/L	89	(70-130)	20	6.1
MBLK	o-Xylene			<0.5	ug/L				
MRL_CHK	o-Xylene		0.5	0.450	ug/L	90	(50-150)		
LCS1	p-Chlorotoluene		5	4.97	ug/L	99	(70-130)		
LCS2	p-Chlorotoluene		5	4.77	ug/L	95	(70-130)	20	4.1
MBLK	p-Chlorotoluene			<0.5	ug/L				
MRL_CHK	p-Chlorotoluene		0.5	0.470	ug/L	94	(50-150)		
LCS1	p-Dichlorobenzene (1,4-DCB)		5	5.12	ug/L	102	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	4.93	ug/L	99	(70-130)	20	3.8

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Report: 531627

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
MRL_CHK	p-Dichlorobenzene (1,4-DCB)		0.5	0.510	ug/L	102	(50-150)		
LCS1	p-Isopropyltoluene		5	4.79	ug/L	96	(70-130)		
LCS2	p-Isopropyltoluene		5	4.66	ug/L	93	(70-130)	20	2.8
MBLK	p-Isopropyltoluene			<0.5	ug/L				
MRL_CHK	p-Isopropyltoluene		0.5	0.460	ug/L	92	(50-150)		
LCS1	sec-Butylbenzene		5	4.91	ug/L	98	(70-130)		
LCS2	sec-Butylbenzene		5	4.81	ug/L	96	(70-130)	20	2.1
MBLK	sec-Butylbenzene			<0.5	ug/L				
MRL_CHK	sec-Butylbenzene		0.5	0.450	ug/L	90	(50-150)		
LCS1	Styrene		5	4.14	ug/L	83	(70-130)		
LCS2	Styrene		5	3.98	ug/L	80	(70-130)	20	3.9
MBLK	Styrene			<0.5	ug/L				
MRL_CHK	Styrene		0.5	0.400	ug/L	80	(50-150)		
LCS1	tert-amyl Methyl Ether		5	4.78	ug/L	96	(70-130)		
LCS2	tert-amyl Methyl Ether		5	4.73	ug/L	95	(70-130)	20	1.1
MBLK	tert-amyl Methyl Ether			<3	ug/L				
MRL_CHK	tert-amyl Methyl Ether		0.5	0.490	ug/L	98	(50-150)		
LCS1	tert-Butyl Ethyl Ether		5	4.97	ug/L	99	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	4.87	ug/L	97	(70-130)	20	2.0
MBLK	tert-Butyl Ethyl Ether			<3	ug/L				
MRL_CHK	tert-Butyl Ethyl Ether		0.5	0.530	ug/L	106	(50-150)		
LCS1	tert-Butylbenzene		5	4.91	ug/L	98	(70-130)		
LCS2	tert-Butylbenzene		5	4.74	ug/L	95	(70-130)	20	3.5
MBLK	tert-Butylbenzene			<0.5	ug/L				
MRL_CHK	tert-Butylbenzene		0.5	0.500	ug/L	100	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	4.29	ug/L	86	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.20	ug/L	84	(70-130)	20	2.1
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.450	ug/L	90	(50-150)		
LCS1	Toluene		5	4.74	ug/L	95	(70-130)		
LCS2	Toluene		5	4.59	ug/L	92	(70-130)	20	3.2
MBLK	Toluene			<0.5	ug/L				
MRL_CHK	Toluene		0.5	0.480	ug/L	96	(50-150)		
LCS1	Toluene-d8 (S)			100	%	100	(70-130)		
LCS2	Toluene-d8 (S)			97.4	%	97	(70-130)		
MBLK	Toluene-d8 (S)			98.4	%	98	(70-130)		
MRL_CHK	Toluene-d8 (S)			98.6	%	99	(70-130)		

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLLW	Toluene-d8 (S)			99.8	%	100	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.78	ug/L	96	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	4.52	ug/L	90	(70-130)	20	5.6
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.530	ug/L	106	(50-150)		
LCS1	trans-1,3-Dichloropropene		5	5.39	ug/L	108	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	5.15	ug/L	103	(70-130)	20	4.5
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	trans-1,3-Dichloropropene		0.5	0.520	ug/L	104	(50-150)		
LCS1	Trichloroethylene (TCE)		5	4.68	ug/L	94	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.31	ug/L	86	(70-130)	20	8.2
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.460	ug/L	92	(50-150)		
LCS1	Trichlorofluoromethane		5	3.76	ug/L	75	(70-130)		
LCS2	Trichlorofluoromethane		5	3.58	ug/L	72	(70-130)	20	4.9
MBLK	Trichlorofluoromethane			<0.5	ug/L				
MRL_CHK	Trichlorofluoromethane		0.5	0.490	ug/L	98	(50-150)		
LCS1	Trichlorotrifluoroethane(Freon		5	3.82	ug/L	76	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon		5	3.77	ug/L	75	(70-130)	20	1.3
MBLK	Trichlorotrifluoroethane(Freon			<0.5	ug/L				
MRL_CHK	Trichlorotrifluoroethane(Freon		0.5	0.500	ug/L	100	(50-150)		
LCS1	Vinyl chloride (VC)		5	4.34	ug/L	87	(70-130)		
LCS2	Vinyl chloride (VC)		5	4.12	ug/L	82	(70-130)	20	5.2
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.510	ug/L	102	(50-150)		
MRLLW	Vinyl chloride (VC)		0.25	0.280	ug/L	112	(50-150)		
QC Ref# 836624 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 05/02/2015**			
MBLK	NDMA-D6 (S)			74.9	%	75	(70-130)		
MRL_CHK	NDMA-D6 (S)		20	77.5	%	78	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2	1.72	ng/L	86	(50-150)		
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/L				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2	1.43	ng/L	72	(50-150)		
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/L				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2	1.71	ng/L	86	(50-150)		
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/L				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2	1.80	ng/L	90	(50-150)		
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/L				

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2	1.64	ng/L	82	(50-150)		
MBLK	N-Nitrosomorpholine			<2	ng/l				
MRL_CHK	N-Nitrosomorpholine		2	2.07	ng/l	104	(50-150)		
MBLK	N-Nitrosopiperidine (NPIP)			<2	ng/L				
MRL_CHK	N-Nitrosopiperidine (NPIP)		2	1.63	ng/L	81	(50-150)		
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/L				
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2	1.65	ng/L	83	(50-150)		
QC Ref# 836627 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 05/04/2015**			
LCS3	NDMA-D6 (S)		20	108	%	108	(70-130)		
MS2_201504240208	NDMA-D6 (S)		20	103	%	103	(70-130)		
MSD2_201504240208	NDMA-D6 (S)		20	98.4	%	98	(70-130)		
LCS3	N-Nitroso dimethylamine (NDMA)		80	71.2	ng/L	89	(70-130)		
MS2_201504240208	N-Nitroso dimethylamine (NDMA)	ND	40	35.0	ng/L	87	(70-130)		
MSD2_201504240208	N-Nitroso dimethylamine (NDMA)	ND	40	33.9	ng/l	85	(70-130)	30	3.2
LCS3	N-Nitrosodibutylamine (NDBA)		80	67.6	ng/L	84	(70-130)		
MS2_201504240208	N-Nitrosodibutylamine (NDBA)	ND	40	33.9	ng/L	84	(70-130)		
MSD2_201504240208	N-Nitrosodibutylamine (NDBA)	ND	40	31.8	ng/l	79	(70-130)	30	6.4
LCS3	N-Nitrosodiethylamine (NDEA)		80	75.1	ng/L	94	(70-130)		
MS2_201504240208	N-Nitrosodiethylamine (NDEA)	ND	40	33.9	ng/L	83	(70-130)		
MSD2_201504240208	N-Nitrosodiethylamine (NDEA)	ND	40	33.2	ng/L	81	(70-130)	30	2.1
LCS3	N-Nitrosodi-n-propylamin(NDPA)		80	81.3	ng/L	102	(70-130)		
MS2_201504240208	N-Nitrosodi-n-propylamin(NDPA)	ND	40	35.2	ng/L	85	(70-130)		
MSD2_201504240208	N-Nitrosodi-n-propylamin(NDPA)	ND	40	35.9	ng/l	87	(70-130)	30	2.0
LCS3	N-Nitrosomethylethylamin(NMEA)		80	71.3	ng/L	89	(70-130)		
MS2_201504240208	N-Nitrosomethylethylamin(NMEA)	ND	40	35.2	ng/L	88	(70-130)		
MSD2_201504240208	N-Nitrosomethylethylamin(NMEA)	ND	40	34.7	ng/L	87	(70-130)	30	1.4
LCS3	N-Nitrosomorpholine		80	73.4	ng/l	92	(70-130)		
MS2_201504240208	N-Nitrosomorpholine		40	34.1	ng/l	85	(70-130)		
MSD2_201504240208	N-Nitrosomorpholine		40	35.1	ng/l	88	(70-130)	30	2.9
LCS3	N-Nitrosopiperidine (NPIP)		80	70.0	ng/L	88	(70-130)		
MS2_201504240208	N-Nitrosopiperidine (NPIP)		40	34.5	ng/L	86	(70-130)		
MSD2_201504240208	N-Nitrosopiperidine (NPIP)		40	33.6	ng/l	84	(70-130)	30	2.6
LCS3	N-Nitrosopyrollidine (NPYR)		80	71.0	ng/L	89	(70-130)		
MS2_201504240208	N-Nitrosopyrollidine (NPYR)	ND	40	37.6	ng/L	94	(70-130)		
MSD2_201504240208	N-Nitrosopyrollidine (NPYR)	ND	40	35.6	ng/L	89	(70-130)	30	5.5
QC Ref# 836736 - Fluoride by SM 4500F-C						**Analysis Date: 05/06/2015**			
LCS1	Fluoride		1	1.02	mg/L	102	(81-116)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory QC
Report: 531627

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Fluoride		1	0.922	mg/L	92	(81-116)	20	10
MBLK	Fluoride			<0.05	mg/L				
MRL_CHK	Fluoride		0.05	0.0466	mg/L	93	(50-150)		
MS_201501190033	Fluoride	0.072	1	1.05	mg/L	98	(80-120)		
MS_201505010026	Fluoride	ND	1	0.991	mg/L	99	(80-120)		
MSD_201505010026	Fluoride	ND	1	0.978	mg/L	98	(80-120)	20	1.3
MSD_201501190033	Fluoride	0.072	1	1.04	mg/L	97	(80-120)	20	0.96
QC Ref# 837153 - Disinfection ByProducts by 300.0 by EPA 300.0						**Analysis Date: 05/06/2015**			
LCS1	Chlorate by IC		200	199	ug/L	100	(90-110)		
LCS2	Chlorate by IC		200	202	ug/L	101	(90-110)	20	1.5
MBLK	Chlorate by IC			<10	ug/L				
MRL_CHK	Chlorate by IC		10	9.21	ug/L	92	(75-125)		
MS_201504300030	Chlorate by IC	ND	100	96.8	ug/L	97	(80-120)		
MS_201504300029	Chlorate by IC	ND	100	99.5	ug/L	97	(80-120)		
MSD_201504300030	Chlorate by IC	ND	100	99.0	ug/L	99	(80-120)	15	2.3
MSD_201504300029	Chlorate by IC	ND	100	101	ug/L	98	(80-120)	15	1.5
QC Ref# 837297 - 1,2,3-Trichloropropane (SIM) by CASRL 524M-TCP						**Analysis Date: 05/07/2015**			
DUP_201505060552	1,2,3-Trichloropropane	ND	0.005	ND	ug/L		(0-20)		
DUP_201505050153	1,2,3-Trichloropropane	0.0343	0.005	0.0323	ug/L		(0-20)	20	5.9
LCS1	1,2,3-Trichloropropane		0.01	0.0107	ug/L	107	(80-120)		
LCS2	1,2,3-Trichloropropane		0.01	0.0106	ug/L	106	(80-120)	20	0.94
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.005	0.00577	ug/L	115	(50-150)		
DUP_201505050153	Toluene-d8 (S)		130	98.6	%	99	(70-130)		
DUP_201505060552	Toluene-d8 (S)		130	93.4	%	93	(70-130)		
LCS1	Toluene-d8 (S)		130	103	%	103	(70-130)		
LCS2	Toluene-d8 (S)		130	95.8	%	96	(70-130)		
MBLK	Toluene-d8 (S)			95.8	%	96	(70-130)		
MBLK	Toluene-d8 (S)			99.8	%	100	(70-130)		
MRL_CHK	Toluene-d8 (S)		130	97.8	%	98	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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CLIENT: **EUROFINS EATON ANALYTICAL**

PROJECT: **531627**

SDG: **15D183**

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GC/MS-VOA	**	2000 –
GC/MS-SVOA	**	3000 –
GC-VOA	**	4000 –
GC-SVOA	**	5000 –
HPLC	METHOD 8330	6000 – 6007
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 05-08-2015
EMAX Batch No.: 15D183

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 531627

Enclosed is the Laboratory report for samples received on 04/27/15.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
201504240402	D183-01	04/24/15	WATER	NITROAROMATICS & NITRAMINES

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

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Submittal Form & Purchase Order 99-34706

15D/F3

Date: 4/27/2015

REPORTING REQUIRMENTS:** ***Do Not Combine Reports with any other samples submitted under different Folder Numbers!
Report & Invoice must have the Folder # **531627** Sub PO# **99-34706** and Job # **1000014**

Report all quality control data according to Method, Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Ship To:
EMAX Laboratories, Inc.
1835 W. 205th St.

Torrance, CA 90501

Phone: 310-618-8889 Fax: 310-618-0818

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified State Certification # & Exp Date for requested tests + matrix.

Samples from: **CALIFORNIA**

Folder #:	Report Due:	Sub PO #:
531627	05/12/2015	99-34706

JLS	Use Lab Order # for ID	*Client Sample ID for reference only*	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
	201504240402	MW-19-2		04/24/15 1205	DW		
EPA 8330	@8330EDD Emax		@8330EDD Emax				

W **Chris Cabrera**

APR 2 7 2015 1039

Eurofins Eaton Analytical

Relinquished by: Sample Control Date 4/27/15 Time 1619

Received by: Date Time

Relinquished by: Sample Control Date Time

Received by: Shizuoma Date 04-27-15 Time 1619

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

Temp - 1.0°C

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN 15D183
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Sheri
☐ EMAX Courier ☑ Client Delivery		Date 4/27/15 Time 1619

COC INSPECTION

☑ Client Name	☑ Client PM/FC	☐ Sampler Name	☑ Sampling Date/Time	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☑ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
Safety Issues (if any)	☐ High concentrations expected	☐ From Superfund Site	☐ Rad screening required		

Note:

PACKAGING INSPECTION

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 1.0 °C	☐ Cooler 2 _____ °C	☐ Cooler 3 _____ °C	☐ Cooler 4 _____ °C	☐ Cooler 5 _____ °C
	☐ Cooler 6 _____ °C	☐ Cooler 7 _____ °C	☑ Cooler 8 _____ °C	☐ Cooler 9 _____ °C	☐ Cooler 10 _____ °C
Thermometer:	*A - S/N* 13053850S	*B - S/N* 14025207	*C S/N* 14025267	*D - S/N* _____	

Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.** FW 10/27/14

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action

4-27-15

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

4/28/15

NOTES/OBSERVATIONS:

LEGEND:

☐ **Continue to next page.**

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in _____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in _____	D16	Preservation not indicated in _____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in _____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	
D10	No initial/date on corrections in COC/label	D22		R10	
D11	Container count mismatch COC vs received	D23		R11	
D12	Container size mismatch COC vs received	D24		R12	

REVIEWS:

Sample Labeling _____ **Date** 4/27/15

SRF _____ **Date** 4/27/15

PM _____ **Date** 4/28/15

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

531627

METHOD 8330
EXPLOSIVES

SDG#: 15D183

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 531627

SDG : 15D183

METHOD 8330
EXPLOSIVES

One (1) water sample was received on 04/27/15 to be analyzed for Explosives in accordance with Method 8330 and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. EXD020WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. EXD020WL/EXD020WC - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : EUROFINS EATON ANALYTICAL
Project : 531627

SDG NO. : 15D183
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXD020WB	1	NA	04/29/1521:25	04/29/1515:12	XD27100A	XD27099A	EXD020W	Method Blank
LCS1W	EXD020WL	1	NA	04/29/1522:00	04/29/1515:12	XD27101A	XD27099A	EXD020W	Lab Control Sample (LCS)
LCD1W	EXD020WC	1	NA	04/29/1522:34	04/29/1515:12	XD27102A	XD27099A	EXD020W	LCS Duplicate
201504240402	D183-01	1	NA	04/29/1523:42	04/29/1515:12	XD27104A	XD27099A	EXD020W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/24/15
Project	: 531627	Date Received:	04/27/15
Batch No.	: 15D183	Date Extracted:	04/29/15 15:12
Sample ID:	201504240402	Date Analyzed:	04/29/15 23:42
Lab Samp ID:	D183-01	Dilution Factor:	1
Lab File ID:	XD27104A	Matrix	: WATER
Ext Btch ID:	EXD020W	% Moisture	: NA
Calib. Ref.:	XD27099A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.59	4.000	89.8	30-160

Note: All positive results are confirmed by Biphenyl column

QC SUMMARIES

METHOD 8330
EXPLOSIVES

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 531627	Date Received: 04/29/15
Batch No. : 15D183	Date Extracted: 04/29/15 15:12
Sample ID: MBLK1W	Date Analyzed: 04/29/15 21:25
Lab Samp ID: EXD020WB	Dilution Factor: 1
Lab File ID: XD27100A	Matrix : WATER
Ext Btch ID: EXD020W	% Moisture : NA
Calib. Ref.: XD27099A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.87	4.000	96.8	70-140

Note: All positive results are confirmed by Biphenyl column

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 531627
BATCH NO.: 15D183
METHOD: METHOD 8330

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	EXD020WB	EXD020WL	EXD020WC		
LAB FILE ID:	XD27100A	XD27101A	XD27102A		
DATE EXTRACTED:	04/29/1515:12	04/29/1515:12	04/29/1515:12	DATE COLLECTED:	NA
DATE ANALYZED:	04/29/1521:25	04/29/1522:00	04/29/1522:34	DATE RECEIVED:	04/29/15
PREP. BATCH:	EXD020W	EXD020W	EXD020W		
CALIB. REF:	XD27099A	XD27099A	XD27099A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
HMX	ND	4.00	3.63	91	4.00	3.51	88	3	60-130	30
RDX	ND	4.00	3.27	82	4.00	3.25	81	1	60-130	30
1,3,5-TNB	ND	4.00	3.98	100	4.00	3.78	94	5	30-130	30
1,3-DNB	ND	4.00	3.68	92	4.00	3.54	89	4	60-130	30
Tetryl	ND	4.00	4.32	108	4.00	4.15	104	4	70-130	30
Nitrobenzene	ND	4.00	3.31	83	4.00	3.40	85	3	60-130	30
2,4,6-TNT	ND	4.00	3.94	99	4.00	4.01	100	2	70-130	30
4-AM-2,6-DNT	ND	4.00	3.68	92	4.00	3.68	92	0	70-130	30
2-AM-4,6-DNT	ND	4.00	3.84	96	4.00	3.86	97	0	70-130	30
2,6-DNT	ND	4.00	3.90	98	4.00	3.95	99	1	70-130	30
2,4-DNT	ND	4.00	4.01	100	4.00	3.95	99	2	70-130	30
2-Nitrotoluene	ND	4.00	3.45	86	4.00	3.44	86	0	70-130	30
3-Nitrotoluene	ND	4.00	3.95	99	4.00	3.97	99	1	70-130	30
4-Nitrotoluene	ND	4.00	3.83	96	4.00	3.54	88	8	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
3,4-Dinitrotoluene	4.00	4.57	114	4.00	4.38	110	70-140

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

ORELAP 4034

AT-1807

Laboratory Report

for

Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109
Attention: David Conner

Date of Issue
05/19/2015

EUROFINS EATON ANALYTICAL

DST: David S Tripp

Project Manager

Report: 531831
Project: TIDEWATER
Group: 2Q15 JPL Triannual
PO#: Sampling

* Accredited in accordance with TNI 2009 and ISO/IEC 17025:2005.
* Laboratory certifies that the test results meet all **TNI 2009 and ISO/IEC 17025:2005** requirements unless noted under the individual analysis.
* Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.
* Test results relate only to the sample(s) tested.

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STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	**Mississippi**	Certified
Alaska	CA00006	**Montana**	Cert 0035
Arizona	AZ0778	**Nebraska**	Certified
Arkansas	Certified	**Nevada**	CA00006-2014-1
California-Monrovia-ELAP	2813	**New Hampshire ***	2959
California-Colton- ELAP	2812	**New Jersey ***	CA 008
California-Folsom- ELAP	2820	**New Mexico**	Certified
Colorado	Certified	**New York ***	11320
Connecticut	PH-0107	**North Carolina**	06701
Delaware	CA 006	**North Dakota**	R-009
Florida *	E871024	**Oregon (Primary AB) ***	**ORELAP 4034**
Georgia	947	**Pennsylvania ***	68-565
Guam	14-003r	**Rhode Island**	LAO00326
Hawaii	Certified	**South Carolina**	87016
Idaho	Certified	**South Dakota**	Certified
Illinois *	200033	**Tennessee**	TN02839
Indiana	C-CA-01	**Texas ***	T104704230-14-7
Kansas *	E-10268	**Utah ***	CA000062014-7
Kentucky	90107	**Vermont**	VT0114
Louisiana *	LA140009	**Virginia ***	460260
Maine	CA0006	**Washington**	C838
Maryland	224	**West Virginia**	9943 C
Commonwealth of Northern Marianas Is.	MP0004	**Wisconsin**	998316660
Massachusetts	M-CA006	**Wyoming**	8TMS-L
Michigan	9906	**EPA Region 5**	Certified
Los Angeles County Sanitation Districts	10264		

* NELAP/TNI Recognized Accreditation Bodies

The tests listed below are accredited and meet the requirements of ISO 17025 as verified by the ANSI-ASQ National Accreditation Board/ACLASS.
Refer to Certificate and scope of accreditation (AT 1807) found at: http://www.eatonanalytical.com

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
1,4-Dioxane	EPA 522	x	x	
2,3,7,8-TCDD	Modified EPA 1613B	x	x	
Acrylamide	In House Method	x	x	
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H (18th)		x	x
Anions and DBPs by IC	EPA 300.0	x	x	x
Anions and DBPs by IC	EPA 300.1	x	x	
Asbestos	EPA 100.2	x		
Bicarbonate Alkalinity as HCO3	SM 2330B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method	x	x	
Carbamates	EPA 531.2	x	x	
Carbonate as CO3	SM 2330B	x	x	x
Carbonyls	EPA 556	x	x	
COD	EPA 410.4 / SM 5220D			x
Chloramines	SM 4500-CL G	x	x	x
Chlorinated Acids	EPA 515.4	x	x	
Chlorinated Acids	EPA 555	x	x	
Chlorine Dioxide	SM 4500-CLO2 D	x	x	
Chlorine -Total/Free/ Combined Residual	SM 4500-Cl G	x	x	x
Conductivity	EPA 120.1			x
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	x	x	
Cyanide, Amenable	SM 4500-CN G	x		x
Cyanide, Free	SM 4500CN F	x	x	x
Cyanide, Total	EPA 335.4	x	x	x
Cyanogen Chloride (screen)	In House Method	x	x	
Diquat and Paraquat	EPA 549.2	x	x	
DBP/HAA	SM 6251B	x	x	
Dissolved Oxygen	SM 4500-O G		x	x
E. Coli	(MTF/EC+MUG)	x		
E. Coli	CFR 141.21(f)(6)(i)		x	x
E. Coli	SM 9223			x
E. Coli (Enumeration)	SM 9221B.1/ SM 9221F	x	x	
E. Coli (Enumeration)	SM 9223B	x	x	
EDB/DCBP	EPA 504.1	x		
EDB/DBCP and DBP	EPA 551.1	x	x	
EDTA and NTA	In House Method	x	x	
Endothall	EPA 548.1	x	x	
Enterococci	SM 9230B	x		x
Fecal Coliform	SM 9221 E (MTF/EC)	x		
Fecal Coliform	SM 9221C, E (MTF/EC)			x
Fecal Coliform (Enumeration)	SM 9221E (MTF/EC)	x	x	
Fecal Coliform with Chlorine Present	SM 9221E			x
Fecal Streptococci	SM 9230B	x		x
Fluoride	SM 4500-F C	x	x	x
Glyphosate	EPA 547	x	x	
Gross Alpha/Beta	EPA 900.0	x	x	x
HAAs/ Dalapon	EPA 552.3	x	x	
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method	x	x	
Heterotrophic Bacteria	SM 9215 B	x	x	
Hexavalent Chromium	EPA 218.6	x	x	x
Hexavalent Chromium	EPA 218.7	x	x	
Hexavalent Chromium	SM 3500-Cr B or C (20th)			x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
Hormones	EPA 539	x	x	
Hydroxide as OH Calc.	SM 2330B	x	x	
Kjeldahl Nitrogen	EPA 351.2			x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA	x	x	
NDMA	EPA 521	x	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x	x
OCL, Pesticides/PCB	EPA 505	x	x	
Ortho Phosphate	EPA 365.1	x	x	
Ortho Phosphate and Total Phosphorous	EPA 365.1/SM 4500-P E			x
Ortho Phosphorous	SM 4500P E	x	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	x	
Perchlorate	EPA 331.0	x	x	
Perchlorate	EPA 314.0	x	x	
Perfluorinated Alkyl Acids	EPA 537	x	x	
pH	EPA 150.1	x		
pH	SM 4500-H+B	x	x	x
Phenylurea Pesticides/ Herbicides	In House Method	x	x	
Pseudomonas	IDEXX Pseudalert	x	x	
Radium-226	RA-226 GA	x	x	
Radium-228	RA-228 GA	x	x	
Radon-222	SM 7500RN	x	x	
Residue, Filterable	SM 2540C	x	x	x
Residue, Non-filterable	SM 2540D			x
Residue, Total	SM 2540B		x	x
Residue, Volatile	EPA 160.4			x
Semi-VOC	EPA 525.2	x	x	
Semi-VOC	EPA 625	x	x	x
Silica	SM 4500-Si D	x	x	x
Silica	SM 4500-SiO2 C	x		x
Sulfide	SM 4500-$S^{=}$ D			x
Sulfite	SM 4500-SO^{3}B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x	x	
Total Coliform	SM 9221 A, B	x	x	
Total Coliform (Enumeration)	SM 9221 A, B, C	x	x	
Total Coliform / E. coli	Colisure	x	x	
Total Coliform	SM 9221B			x
Total Coliform with Chlorine Present	SM 9221B			x
Total Coliform / E.coli	SM 9223	x	x	
TOC	SM 5310C		x	x
TOC/DOC	SM 5310C	x	x	
TOX	SM 5320B			x
Total Phenols	EPA 420.1			x
Total Phenols	EPA 420.4	x	x	x
Total Phosphorous	SM 4500 P F			x
Turbidity	EPA 180.1	x	x	x
Turbidity	SM 2130B	x		x
Uranium by ICP/MS	EPA 200.8	x	x	
UV 254	SM 5910B	x		
VOC	EPA 524.2/EPA 524.3	x	x	
VOC	EPA 624	x	x	x
VOC	EPA SW 846 8260	x	x	
VOC	In House Method	x	x	
Yeast and Mold	SM 9610	x	x	

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Acknowledgement of Samples Received

Addr: **Tidewater, Inc.**
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena91109
Attn: David Conner
Phone: 619-726-7311

Client ID: JPL-CA
Folder #: 531831
Project: TIDEWATER
Sample Group: 2Q15 JPL Triannual Sampling

Project Manager: David S Tripp
Phone: (626) 386-1158
PO #: 1213-000-05

The following samples were received from you on **April 27, 2015** at **1853**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
201504270332	MW-3-2	04/27/2015 1210

@ANIONS48	@8330EDD EMAX	@DIOXANE
@ML521_SPE8	@TCP-524	@VOASDWA
@VOA-TBA	Chlorate by IC	Fluoride
Hexavalent chromium(Dissolved)		

Test Description

@ANIONS48 -- Nitrate, Nitrite by EPA 300.0

@8330EDD EMAX -- @8330EDD Emax

@DIOXANE -- 1,4-Dioxane

@ML521_SPE8 -- Nitrosamines by GCMS

@TCP-524 -- 1,2,3-Trichloropropane (SIM)

@VOASDWA -- Volatile Organics by GCMS

@VOA-TBA -- TBA by EPA 524.2 Modified

750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (626) 386-1101 http://www.EatonAnalytical.com

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CHAIN OF CUSTODY RECORD

531831

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: 4.4 - 0.0 = 4.4 ·6
Gun # 352 A

SAMPLES CHECKED AGAINST COC BY: Weena

SAMPLES LOGGED IN BY: N

SAMPLES REC'D DAY OF COLLECTION? ☑ (check for yes)

SAMPLE TEMP RECEIVED AT:

☐ Colton / No. California / Arizona _____ °C (Compliance: 4 ± 2 °C)

☑ Monrovia 4.4 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen _____ Partially Frozen _____ Thawed _____ Wet Ice _____ No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: JPL-CA

PROJECT CODE: TIDEWATER bottle order

EEA CLIENT CODE:

COC ID:

SAMPLE GROUP: Blaine Tech

TAT requested: rush by adv notice only STD ☒ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES ☐ (check for yes) - Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)

REGULATION INVOLVED: _____

Type of samples (circle one): **ROUTINE SPECIAL CONFIRMATION** (eg. SDWA, Phase V, NPDES, FDA,...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☒ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	SAMPLER COMMENTS
4-27-15	1210	MW-3-2		RGW			

*** MATRIX TYPES:** **RSW** = Raw Surface Water **CFW** = Chlor(am)inated Finished Water **SEAW** = Sea Water **BW** = Bottled Water **SO** = Soil **O** = Other - Please Identify
RGW = Raw Ground Water **FW** = Other Finished Water **WW** = Waste Water **SW** = Storm Water **SL** = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	Andy Wolff	Andy Wolff	Blaine Tech / Area Supervisor	4-27-15	1210
RELINQUISHED BY:	Andy Wolff	" "	" "	4-27-15	1515
RECEIVED BY:	[signature]	X BALLIOT	EEA	4/27/15	1731
RELINQUISHED BY:	[signature]	X BALLIOT	EEA	4/27/15	1834
RECEIVED BY:	[signature]	Weena Tonzwarowia	EEA	4-27-15	1853

QA FO 0029 (06/26/2013)

PAGE 1 OF 1

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formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
(626) 386-1100 FAX (626) 386-1101

Kit Order for Jet Propulsion Laboratory

David S Tripp is your Eurofins Eaton Analytical Project Manager

Note: Sampler Please return this paper with your samples

Kit #: 110244
Created By: ADT
Deliver By: 04/10/2015
STG: Bottle Orders
Ice Type: W

Client ID: JPL-CA
Project Code: TIDEWATER Bottle Orders
Group Name: 2Q15 JPL Triannual Sampling
PO#/JOB#: 1213-000-05

Ship Sample Kits to
Jet Propulsion Laboratory
20735 Belshaw Avenue
Carson, CA 90746

Attn: Robert Sunjara
Phone: 310-885-4455 x 115

Send Report to
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

Billing Address
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

# of Sample	Tests	Bottles - Qty for each sample, type & preservative if ai	UN DOT #
7	@8330EDD EMAX	2 1L amber glass 1ml thio (8%)	
7	@ANIONS48, Fluoride	1 125ml poly no preservative	
7	@DIOXANE	3 125ml amber glass 6.25 Sulfite +125 mg Bisulfite	
7	@ML521_SPE8	3 500ml amber glass 40-50 mg Na Thiosulfate	
7	@VOASDWA	3 40ml amber glass vial 4drops 6N HCL (36%)	UN1789
7	@VOA-TBA	4 40ml amber glass vial TBA_4 drops 1:1 HCL	UN1789
7	Chlorate by IC	1 60mL poly 0.6mL 1% EDA solution	
7	Hexavalent Chromium (Dissolved)	1 125ml poly 1.25 ml NH4SO4/NH4OH buffer	

Comments

One set per cooler

Code	Status	Date Shipped	Via	Tracking #	# of Coolers	Received By

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Hits
Report: 531831

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/27/2015 1853

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201504270332	**MW-3-2**				
05/07/2015 14:15	Chlorate by IC		270		ug/L	10
05/01/2015 6:21	Chloroform (Trichloromethane)		3.4		ug/L	0.5
05/01/2015 17:33	Fluoride		0.43	4	mg/L	0.05
04/30/2015 12:01	Hexavalent chromium(Dissolved)		0.31		ug/L	0.02
04/28/2015 03:27	Nitrate as Nitrogen by IC		0.78	10	mg/L	0.2
04/28/2015 03:27	Nitrate as NO3 (calc)		3.4	45	mg/L	0.88
05/01/2015 6:21	Total THM		3.4	80	ug/L	0.5

SUMMARY OF POSITIVE DATA ONLY

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
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1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 531831

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/27/2015 1853

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
MW-3-2 (201504270332)						**Sampled on 04/27/2015 1210**		
		EPA 522 - 1,4-Dioxane						
4/30/2015	05/05/2015 22:29	836841	(EPA 522)	1,4-Dioxane	ND	ug/L	1	1
4/30/2015	05/05/2015 22:29	836841	(EPA 522)	Dioxane-d8	94	%		1
		EPA 521 - Nitrosamines by GCMS						
4/30/2015	05/03/2015 01:30	836624	(EPA 521)	N-Nitrosodibutylamine (NDBA)	ND	ng/L	2	1
4/30/2015	05/03/2015 01:30	836624	(EPA 521)	N-Nitrosodiethylamine (NDEA)	ND	ng/L	2	1
4/30/2015	05/03/2015 01:30	836624	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
4/30/2015	05/03/2015 01:30	836624	(EPA 521)	N-Nitrosodi-n-propylamine (NDPA)	ND	ng/L	2	1
4/30/2015	05/03/2015 01:30	836624	(EPA 521)	N-Nitrosomethylethylamine (NMEA)	ND	ng/L	2	1
4/30/2015	05/03/2015 01:30	836624	(EPA 521)	N-Nitrosomorpholine	ND	ng/l	2	1
4/30/2015	05/03/2015 01:30	836624	(EPA 521)	N-Nitrosopiperidine (NPIP)	ND	ng/L	2	1
4/30/2015	05/03/2015 01:30	836624	(EPA 521)	N-Nitrosopyrollidine (NPYR)	ND	ng/L	2	1
4/30/2015	05/03/2015 01:30	836624	(EPA 521)	NDMA-D6	88	%		1
		EPA 218.6 - Hexavalent chromium(Dissolved)						
	04/30/2015 12:01	835964	(EPA 218.6)	Hexavalent chromium(Dissolved)	0.31	ug/L	0.02	1
		EPA 300.0 - Nitrate, Nitrite by EPA 300.0						
	04/28/2015 03:27	835129	(EPA 300.0)	Nitrate as Nitrogen by IC	0.78	mg/L	0.2	2
	04/28/2015 03:27	835129	(EPA 300.0)	Nitrate as NO3 (calc)	3.4	mg/L	0.88	2
		EPA 300.0 - Disinfection ByProducts by 300.0						
	05/07/2015 14:15	837189	(EPA 300.0)	Chlorate by IC	270	ug/L	10	1
		EPA 8330 - @8330EDD Emax						
	04/30/2015 00:16		(EPA 8330)	1,3,5-TNB	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	1,3-DNB	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	2,4,6-TNT	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	2,4-DNT	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	2,6-DNT	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	2-AM-4,6DNT	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	2-Nitrotoluene	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	3-Nitrotoluene	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	4-AM-2,6-DNT	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	4-Nitrotoluene	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	HMX	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	Nitrobenzene	ND	ug/L	0.4	1
	04/30/2015 00:16		(EPA 8330)	RDX	ND	ug/L	0.4	1

Rounding on totals after summation.
(c) - indicates calculated results

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1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 531831

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/27/2015 1853

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	04/30/2015	00:16		(EPA 8330)	Tetryl	ND	ug/L	0.4	1
	04/30/2015	00:16		(EPA 8330)	3,4-Dinitrotoluene	94	%		1
		EPA 524.2 - Volatile Organics by GCMS							
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Benzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Bromobenzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Bromoethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Bromoform	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Chloroethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Chloroform (Trichloromethane)	3.4	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 531831

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/27/2015 1853

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Dibromomethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Dichloromethane	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Naphthalene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	o-Xylene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Styrene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Toluene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Total THM	3.4	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Total xylenes	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data
Report: 531831

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/27/2015 1853

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.5	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.3	1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	1,2-Dichloroethane-d4	109	%		1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	4-Bromofluorobenzene	102	%		1
4/30/2015	05/01/2015	6:21	835983	(EPA 524.2)	Toluene-d8	85	%		1
		CASRL 524M-TCP - 1,2,3-Trichloropropane (SIM)							
5/7/2015	05/07/2015	16:04	837297	(CASRL 524M-TCP)	1,2,3-Trichloropropane	ND	ug/L	0.005	1
5/7/2015	05/07/2015	16:04	837297	(CASRL 524M-TCP)	Toluene-d8	97	%		1
		EPA 524.2 SIM - TBA by EPA 524.2 Modified							
4/30/2015	04/30/2015	17:10	835946	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2	1
4/30/2015	04/30/2015	17:10	835946	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	104	%		1
4/30/2015	04/30/2015	17:10	835946	(EPA 524.2 SIM)	4-Bromofluorobenzene	94	%		1
4/30/2015	04/30/2015	17:10	835946	(EPA 524.2 SIM)	Toluene-d8	94	%		1
		SM 4500F-C - Fluoride							
	05/01/2015	17:33	836111	(SM 4500F-C)	Fluoride	0.43	mg/L	0.05	1

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Folder Comments

Analytical results for 8330 are submitted by Emax Laboratories, Inc. Torrance, CA

The Comments Report may be blank if there are no comments for this report.

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Tidewater, Inc.

QC Ref # 835129 - Nitrate, Nitrite by EPA 300.0 **Analysis Date: 04/28/2015**
201504270332 MW-3-2 Analyzed by: CYP

QC Ref # 835946 - TBA by EPA 524.2 Modified **Analysis Date: 04/30/2015**
201504270332 MW-3-2 Analyzed by: KCP

QC Ref # 835964 - Hexavalent chromium(Dissolved) **Analysis Date: 04/30/2015**
201504270332 MW-3-2 Analyzed by: TLH

QC Ref # 835983 - Volatile Organics by GCMS **Analysis Date: 05/01/2015**
201504270332 MW-3-2 Analyzed by: KAM

QC Ref # 836111 - Fluoride **Analysis Date: 05/01/2015**
201504270332 MW-3-2 Analyzed by: MIA8

QC Ref # 836624 - Nitrosamines by GCMS **Analysis Date: 05/03/2015**
201504270332 MW-3-2 Analyzed by: PAC

QC Ref # 836841 - 1,4-Dioxane **Analysis Date: 05/05/2015**
201504270332 MW-3-2 Analyzed by: JYH

QC Ref # 837189 - Disinfection ByProducts by 300.0 **Analysis Date: 05/07/2015**
201504270332 MW-3-2 Analyzed by: NJR

QC Ref # 837297 - 1,2,3-Trichloropropane (SIM) **Analysis Date: 05/07/2015**
201504270332 MW-3-2 Analyzed by: KAM

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Laboratory QC
Report: 531831

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 835129 - Nitrate, Nitrite by EPA 300.0 by EPA 300.0						**Analysis Date: 04/27/2015**			
LCS1	Nitrate as Nitrogen by IC		2.5	2.36	mg/L	95	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.38	mg/L	95	(90-110)	20	0.42
MBLK	Nitrate as Nitrogen by IC			<0.10	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0435	mg/L	87	(50-150)		
MS_201504270248	Nitrate as Nitrogen by IC	4.0	2.6	6.67	mg/L	105	(80-120)		
MS_201504270258	Nitrate as Nitrogen by IC	4.6	1.3	5.87	mg/L	102	(80-120)		
MSD_201504270248	Nitrate as Nitrogen by IC	4.0	2.6	6.69	mg/L	106	(80-120)	20	0.30
MSD_201504270258	Nitrate as Nitrogen by IC	4.6	1.3	5.87	mg/L	102	(80-120)	20	0.0
QC Ref# 835946 - TBA by EPA 524.2 Modified by EPA 524.2 SIM						**Analysis Date: 04/30/2015**			
LCS1	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			108	%	108	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
LCS1	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS2	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MBLK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS1	t-Butyl Alcohol		5	4.57	ug/L	91	(70-130)		
LCS2	t-Butyl Alcohol		5	4.50	ug/L	90	(70-130)	20	1.5
MBLK	t-Butyl Alcohol			<1	ug/L				
MRL_CHK	t-Butyl Alcohol		2	2.44	ug/L	122	(50-150)		
LCS1	Toluene-d8 (S)			96.0	%	96	(70-130)		
LCS2	Toluene-d8 (S)			96.0	%	96	(70-130)		
MBLK	Toluene-d8 (S)			98.0	%	98	(70-130)		
MRL_CHK	Toluene-d8 (S)			96.0	%	96	(70-130)		
QC Ref# 835964 - Hexavalent chromium(Dissolved) by EPA 218.6						**Analysis Date: 04/30/2015**			
LCS1	Hexavalent chromium(Dissolved)		2	1.99	ug/L	100	(90-110)		
LCS2	Hexavalent chromium(Dissolved)		2	2.00	ug/L	100	(90-110)		
MBLK	Hexavalent chromium(Dissolved)			<0.020	ug/L				
MRL_CHK	Hexavalent chromium(Dissolved)		0.02	0.0159	ug/L	80	(50-150)		
MS_201504240198	Hexavalent chromium(Dissolved)	0.066	2	1.91	ug/L	92	(90-110)		
MS_201504280073	Hexavalent chromium(Dissolved)	ND	2	2.02	ug/L	101	(90-110)		
MSD_201504280073	Hexavalent chromium(Dissolved)	ND	2	1.99	ug/L	99	(90-110)	20	1.5
MSD_201504240198	Hexavalent chromium(Dissolved)	0.066	2	2.07	ug/L	100	(90-110)	20	8.0
QC Ref# 835983 - Volatile Organics by GCMS by EPA 524.2						**Analysis Date: 05/01/2015**			

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531831

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,1,1,2-Tetrachloroethane		5	4.63	ug/L	93	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	4.66	ug/L	93	(70-130)	20	0.65
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,1,2-Tetrachloroethane		0.5	0.410	ug/L	82	(50-150)		
LCS1	1,1,1-Trichloroethane		5	4.53	ug/L	91	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.77	ug/L	95	(70-130)	20	5.2
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,1-Trichloroethane		0.5	0.430	ug/L	86	(50-150)		
LCS1	1,1,2,2-Tetrachloroethane		5	5.13	ug/L	103	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	5.26	ug/L	105	(70-130)	20	2.5
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,2,2-Tetrachloroethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	1,1,2-Trichloroethane		5	4.49	ug/L	90	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.65	ug/L	93	(70-130)	20	3.5
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.470	ug/L	94	(50-150)		
LCS1	1,1-Dichloroethane		5	4.75	ug/L	95	(70-130)		
LCS2	1,1-Dichloroethane		5	4.81	ug/L	96	(70-130)	20	1.3
MBLK	1,1-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethane		0.5	0.550	ug/L	110	(50-150)		
LCS1	1,1-Dichloroethylene		5	4.78	ug/L	96	(70-130)		
LCS2	1,1-Dichloroethylene		5	4.90	ug/L	98	(70-130)	20	2.5
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.500	ug/L	100	(50-150)		
LCS1	1,1-Dichloropropene		5	4.82	ug/L	96	(70-130)		
LCS2	1,1-Dichloropropene		5	4.94	ug/L	99	(70-130)	20	2.5
MBLK	1,1-Dichloropropene			<0.5	ug/L				
MRL_CHK	1,1-Dichloropropene		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,2,3-Trichlorobenzene		5	5.25	ug/L	105	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	5.50	ug/L	110	(70-130)	20	4.7
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,3-Trichlorobenzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,2,3-Trichloropropane		5	4.95	ug/L	99	(70-130)		
LCS2	1,2,3-Trichloropropane		5	4.97	ug/L	99	(70-130)	20	0.40
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,2,4-Trichlorobenzene		5	5.24	ug/L	105	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	5.43	ug/L	109	(70-130)	20	3.6

Spike recovery is already corrected for native results.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531831

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.460	ug/L	92	(50-150)		
LCS1	1,2,4-Trimethylbenzene		5	5.18	ug/L	104	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	5.22	ug/L	104	(70-130)	20	0.77
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trimethylbenzene		0.5	0.430	ug/L	86	(50-150)		
LCS1	1,2-Dichloroethane		5	4.51	ug/L	90	(70-130)		
LCS2	1,2-Dichloroethane		5	4.69	ug/L	94	(70-130)	20	3.9
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.550	ug/L	110	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)			94.0	%	94	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			95.6	%	96	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			102	%	102	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			107	%	107	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)			109	%	109	(70-130)		
LCS1	1,2-Dichloropropane		5	4.76	ug/L	95	(70-130)		
LCS2	1,2-Dichloropropane		5	4.96	ug/L	99	(70-130)	20	4.1
MBLK	1,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,2-Dichloropropane		0.5	0.450	ug/L	90	(50-150)		
LCS1	1,3,5-Trimethylbenzene		5	5.23	ug/L	105	(70-130)		
LCS2	1,3,5-Trimethylbenzene		5	5.28	ug/L	106	(70-130)	20	0.95
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,3,5-Trimethylbenzene		0.5	0.410	ug/L	82	(50-150)		
LCS1	1,3-Dichloropropane		5	4.79	ug/L	96	(70-130)		
LCS2	1,3-Dichloropropane		5	4.86	ug/L	97	(70-130)	20	1.5
MBLK	1,3-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,3-Dichloropropane		0.5	0.500	ug/L	100	(50-150)		
LCS1	2,2-Dichloropropane		5	4.22	ug/L	84	(70-130)		
LCS2	2,2-Dichloropropane		5	4.36	ug/L	87	(70-130)	20	3.3
MBLK	2,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	2,2-Dichloropropane		0.5	0.470	ug/L	94	(50-150)		
LCS1	2-Butanone (MEK)		50	44.7	ug/L	89	(70-130)		
LCS2	2-Butanone (MEK)		50	45.7	ug/L	91	(70-130)	20	2.2
MBLK	2-Butanone (MEK)			<5.0	ug/L				
MRL_CHK	2-Butanone (MEK)		5	5.86	ug/L	117	(50-150)		
LCS1	4-Bromofluorobenzene (S)			98.8	%	99	(70-130)		
LCS2	4-Bromofluorobenzene (S)			99.8	%	100	(70-130)		
MBLK	4-Bromofluorobenzene (S)			99.2	%	99	(70-130)		

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Report: 531831

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	4-Bromofluorobenzene (S)			102	%	102	(70-130)		
MRLLW	4-Bromofluorobenzene (S)			99.2	%	99	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	52.8	ug/L	106	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	54.0	ug/L	108	(70-130)	20	2.3
MBLK	4-Methyl-2-Pentanone (MIBK)			<5	ug/L				
MRL_CHK	4-Methyl-2-Pentanone (MIBK)		5	4.74	ug/L	95	(50-150)		
LCS1	Benzene		5	5.00	ug/L	100	(70-130)		
LCS2	Benzene		5	5.15	ug/L	103	(70-130)	20	3.0
MBLK	Benzene			<0.5	ug/L				
MRL_CHK	Benzene		0.5	0.500	ug/L	100	(50-150)		
LCS1	Bromobenzene		5	5.08	ug/L	102	(70-130)		
LCS2	Bromobenzene		5	5.13	ug/L	103	(70-130)	20	0.98
MBLK	Bromobenzene			<0.5	ug/L				
MRL_CHK	Bromobenzene		0.5	0.500	ug/L	100	(50-150)		
LCS1	Bromochloromethane		5	4.71	ug/L	94	(70-130)		
LCS2	Bromochloromethane		5	4.87	ug/L	97	(70-130)	20	3.3
MBLK	Bromochloromethane			<0.5	ug/L				
MRL_CHK	Bromochloromethane		0.5	0.530	ug/L	106	(50-150)		
LCS1	Bromodichloromethane		5	4.46	ug/L	89	(70-130)		
LCS2	Bromodichloromethane		5	4.65	ug/L	93	(70-130)	20	4.2
MBLK	Bromodichloromethane			<0.5	ug/L				
MRL_CHK	Bromodichloromethane		0.5	0.430	ug/L	86	(50-150)		
LCS1	Bromoethane		5	4.82	ug/L	96	(70-130)		
LCS2	Bromoethane		5	4.92	ug/L	98	(70-130)	20	2.0
MBLK	Bromoethane			<0.5	ug/L				
MRL_CHK	Bromoethane		0.5	0.540	ug/L	108	(50-150)		
LCS1	Bromoform		5	4.31	ug/L	86	(70-130)		
LCS2	Bromoform		5	4.26	ug/L	85	(70-130)	20	1.2
MBLK	Bromoform			<0.5	ug/L				
MRL_CHK	Bromoform		0.5	0.480	ug/L	96	(50-150)		
LCS1	Bromomethane (Methyl Bromide)		5	4.91	ug/L	98	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	5.13	ug/L	103	(70-130)	20	4.4
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
MRL_CHK	Bromomethane (Methyl Bromide)		0.5	0.640	ug/L	128	(50-150)		
LCS1	Carbon disulfide		5	4.55	ug/L	91	(70-130)		
LCS2	Carbon disulfide		5	4.77	ug/L	95	(70-130)	20	4.7
MBLK	Carbon disulfide			<0.5	ug/L				
MRL_CHK	Carbon disulfide		0.5	0.470	ug/L	94	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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Laboratory QC
Report: 531831

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Carbon Tetrachloride		5	4.49	ug/L	90	(70-130)		
LCS2	Carbon Tetrachloride		5	4.52	ug/L	90	(70-130)	20	0.67
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.410	ug/L	82	(50-150)		
LCS1	Chlorobenzene		5	4.74	ug/L	95	(70-130)		
LCS2	Chlorobenzene		5	4.87	ug/L	97	(70-130)	20	2.7
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	Chlorodibromomethane		5	4.96	ug/L	99	(70-130)		
LCS2	Chlorodibromomethane		5	4.87	ug/L	97	(70-130)	20	1.8
MBLK	Chlorodibromomethane			<0.5	ug/L				
MRL_CHK	Chlorodibromomethane		0.5	0.410	ug/L	82	(50-150)		
LCS1	Chloroethane		5	4.43	ug/L	89	(70-130)		
LCS2	Chloroethane		5	4.87	ug/L	97	(70-130)	20	9.5
MBLK	Chloroethane			<0.5	ug/L				
MRL_CHK	Chloroethane		0.5	0.530	ug/L	106	(50-150)		
LCS1	Chloroform (Trichloromethane)		5	4.52	ug/L	90	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.75	ug/L	95	(70-130)	20	5.0
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
MRL_CHK	Chloroform (Trichloromethane)		0.5	0.600	ug/L	120	(50-150)		
LCS1	Chloromethane(Methyl Chloride)		5	4.72	ug/L	94	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	5.10	ug/L	102	(70-130)	20	7.7
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
MRL_CHK	Chloromethane(Methyl Chloride)		0.5	0.520	ug/L	104	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	4.69	ug/L	94	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	4.79	ug/L	96	(70-130)	20	2.1
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.560	ug/L	112	(50-150)		
LCS1	cis-1,3-Dichloropropene		5	5.02	ug/L	100	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	5.03	ug/L	101	(70-130)	20	0.20
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	cis-1,3-Dichloropropene		0.5	0.560	ug/L	112	(50-150)		
LCS1	Dibromomethane		5	4.63	ug/L	93	(70-130)		
LCS2	Dibromomethane		5	4.62	ug/L	92	(70-130)	20	0.22
MBLK	Dibromomethane			<0.5	ug/L				
MRL_CHK	Dibromomethane		0.5	0.520	ug/L	104	(50-150)		
LCS1	Dichlorodifluoromethane		5	4.86	ug/L	97	(70-130)		
LCS2	Dichlorodifluoromethane		5	5.23	ug/L	105	(70-130)	20	7.3

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531831

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
MRL_CHK	Dichlorodifluoromethane		0.5	0.520	ug/L	104	(50-150)		
LCS1	Dichloromethane		5	4.66	ug/L	93	(70-130)		
LCS2	Dichloromethane		5	4.75	ug/L	95	(70-130)	20	1.9
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.630	ug/L	126	(50-150)		
LCS1	Di-isopropyl ether		5	4.77	ug/L	95	(70-130)		
LCS2	Di-isopropyl ether		5	4.74	ug/L	95	(70-130)	20	0.63
MBLK	Di-isopropyl ether			<3.0	ug/L				
MRL_CHK	Di-isopropyl ether		0.5	0.570	ug/L	114	(50-150)		
LCS1	Ethyl benzene		5	4.87	ug/L	97	(70-130)		
LCS2	Ethyl benzene		5	5.07	ug/L	101	(70-130)	20	4.0
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.440	ug/L	88	(50-150)		
LCS1	Hexachlorobutadiene		5	5.19	ug/L	104	(70-130)		
LCS2	Hexachlorobutadiene		5	5.24	ug/L	105	(70-130)	20	0.96
MBLK	Hexachlorobutadiene			<0.5	ug/L				
MRL_CHK	Hexachlorobutadiene		0.5	0.490	ug/L	98	(50-150)		
LCS1	Isopropylbenzene		5	5.10	ug/L	102	(70-130)		
LCS2	Isopropylbenzene		5	5.23	ug/L	105	(70-130)	20	2.5
MBLK	Isopropylbenzene			<0.5	ug/L				
MRL_CHK	Isopropylbenzene		0.5	0.430	ug/L	86	(50-150)		
LCS1	m,p-Xylenes		10	10.1	ug/L	101	(70-130)		
LCS2	m,p-Xylenes		10	10.6	ug/L	106	(70-130)	20	4.8
MBLK	m,p-Xylenes			<0.5	ug/L				
MRL_CHK	m,p-Xylenes		1	0.840	ug/L	84	(50-150)		
MRLLW	m,p-Xylenes		0.5	0.390	ug/L	78	(50-150)		
LCS1	m-Dichlorobenzene (1,3-DCB)		5	5.04	ug/L	101	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	5.17	ug/L	103	(70-130)	20	2.5
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
MRL_CHK	m-Dichlorobenzene (1,3-DCB)		0.5	0.490	ug/L	98	(50-150)		
LCS1	Methyl Tert-butyl ether (MTBE)		5	5.14	ug/L	103	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	5.18	ug/L	104	(70-130)	20	0.78
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
MRL_CHK	Methyl Tert-butyl ether (MTBE)		0.5	0.570	ug/L	114	(50-150)		
LCS1	Naphthalene		5	5.26	ug/L	105	(70-130)		
LCS2	Naphthalene		5	5.47	ug/L	109	(70-130)	20	3.9
MBLK	Naphthalene			<0.5	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531831

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	Naphthalene		0.5	0.380	ug/L	76	(50-150)		
LCS1	n-Butylbenzene		5	5.23	ug/L	105	(70-130)		
LCS2	n-Butylbenzene		5	5.38	ug/L	108	(70-130)	20	2.8
MBLK	n-Butylbenzene			<0.5	ug/L				
MRL_CHK	n-Butylbenzene		0.5	0.460	ug/L	92	(50-150)		
LCS1	n-Propylbenzene		5	4.96	ug/L	99	(70-130)		
LCS2	n-Propylbenzene		5	5.08	ug/L	102	(70-130)	20	2.4
MBLK	n-Propylbenzene			<0.5	ug/L				
MRL_CHK	n-Propylbenzene		0.5	0.470	ug/L	94	(50-150)		
LCS1	o-Chlorotoluene		5	5.18	ug/L	104	(70-130)		
LCS2	o-Chlorotoluene		5	5.45	ug/L	109	(70-130)	20	5.1
MBLK	o-Chlorotoluene			<0.5	ug/L				
MRL_CHK	o-Chlorotoluene		0.5	0.450	ug/L	90	(50-150)		
LCS1	o-Dichlorobenzene (1,2-DCB)		5	5.06	ug/L	101	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	5.22	ug/L	104	(70-130)	20	3.1
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
MRL_CHK	o-Dichlorobenzene (1,2-DCB)		0.5	0.550	ug/L	110	(50-150)		
LCS1	o-Xylene		5	4.77	ug/L	95	(70-130)		
LCS2	o-Xylene		5	4.95	ug/L	99	(70-130)	20	3.7
MBLK	o-Xylene			<0.5	ug/L				
MRL_CHK	o-Xylene		0.5	0.420	ug/L	84	(50-150)		
LCS1	p-Chlorotoluene		5	5.12	ug/L	102	(70-130)		
LCS2	p-Chlorotoluene		5	5.41	ug/L	108	(70-130)	20	5.5
MBLK	p-Chlorotoluene			<0.5	ug/L				
MRL_CHK	p-Chlorotoluene		0.5	0.470	ug/L	94	(50-150)		
LCS1	p-Dichlorobenzene (1,4-DCB)		5	5.07	ug/L	101	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	5.22	ug/L	104	(70-130)	20	2.9
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
MRL_CHK	p-Dichlorobenzene (1,4-DCB)		0.5	0.510	ug/L	102	(50-150)		
LCS1	p-Isopropyltoluene		5	5.39	ug/L	108	(70-130)		
LCS2	p-Isopropyltoluene		5	5.47	ug/L	109	(70-130)	20	1.5
MBLK	p-Isopropyltoluene			<0.5	ug/L				
MRL_CHK	p-Isopropyltoluene		0.5	0.400	ug/L	80	(50-150)		
LCS1	sec-Butylbenzene		5	5.34	ug/L	107	(70-130)		
LCS2	sec-Butylbenzene		5	5.46	ug/L	109	(70-130)	20	2.2
MBLK	sec-Butylbenzene			<0.5	ug/L				
MRL_CHK	sec-Butylbenzene		0.5	0.410	ug/L	82	(50-150)		
LCS1	Styrene		5	4.72	ug/L	94	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 531831

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Styrene		5	4.83	ug/L	97	(70-130)	20	2.3
MBLK	Styrene			<0.5	ug/L				
MRL_CHK	Styrene		0.5	0.360	ug/L	72	(50-150)		
LCS1	tert-amyl Methyl Ether		5	5.13	ug/L	103	(70-130)		
LCS2	tert-amyl Methyl Ether		5	5.16	ug/L	103	(70-130)	20	0.58
MBLK	tert-amyl Methyl Ether			<3	ug/L				
MRL_CHK	tert-amyl Methyl Ether		0.5	0.510	ug/L	102	(50-150)		
LCS1	tert-Butyl Ethyl Ether		5	5.12	ug/L	102	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	5.17	ug/L	103	(70-130)	20	0.97
MBLK	tert-Butyl Ethyl Ether			<3	ug/L				
MRL_CHK	tert-Butyl Ethyl Ether		0.5	0.570	ug/L	114	(50-150)		
LCS1	tert-Butylbenzene		5	5.09	ug/L	102	(70-130)		
LCS2	tert-Butylbenzene		5	5.14	ug/L	103	(70-130)	20	0.98
MBLK	tert-Butylbenzene			<0.5	ug/L				
MRL_CHK	tert-Butylbenzene		0.5	0.420	ug/L	84	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	4.74	ug/L	95	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.99	ug/L	100	(70-130)	20	5.1
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.460	ug/L	92	(50-150)		
LCS1	Toluene		5	4.77	ug/L	95	(70-130)		
LCS2	Toluene		5	4.82	ug/L	96	(70-130)	20	1.0
MBLK	Toluene			<0.5	ug/L				
MRL_CHK	Toluene		0.5	0.500	ug/L	100	(50-150)		
LCS1	Toluene-d8 (S)			98.2	%	98	(70-130)		
LCS2	Toluene-d8 (S)			99.4	%	99	(70-130)		
MBLK	Toluene-d8 (S)			91.4	%	91	(70-130)		
MRL_CHK	Toluene-d8 (S)			102	%	102	(70-130)		
MRLLW	Toluene-d8 (S)			94.6	%	95	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.98	ug/L	100	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	5.12	ug/L	102	(70-130)	20	2.8
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.520	ug/L	104	(50-150)		
LCS1	trans-1,3-Dichloropropene		5	4.65	ug/L	93	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	4.84	ug/L	97	(70-130)	20	4.0
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	trans-1,3-Dichloropropene		0.5	0.550	ug/L	110	(50-150)		
LCS1	Trichloroethylene (TCE)		5	4.72	ug/L	94	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.96	ug/L	99	(70-130)	20	5.0

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Report: 531831

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.480	ug/L	96	(50-150)		
LCS1	Trichlorofluoromethane		5	4.49	ug/L	90	(70-130)		
LCS2	Trichlorofluoromethane		5	4.76	ug/L	95	(70-130)	20	5.8
MBLK	Trichlorofluoromethane			<0.5	ug/L				
MRL_CHK	Trichlorofluoromethane		0.5	0.460	ug/L	92	(50-150)		
LCS1	Trichlorotrifluoroethane(Freon		5	5.14	ug/L	103	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon		5	5.33	ug/L	107	(70-130)	20	3.6
MBLK	Trichlorotrifluoroethane(Freon			<0.5	ug/L				
MRL_CHK	Trichlorotrifluoroethane(Freon		0.5	0.490	ug/L	98	(50-150)		
LCS1	Vinyl chloride (VC)		5	4.89	ug/L	98	(70-130)		
LCS2	Vinyl chloride (VC)		5	4.91	ug/L	98	(70-130)	20	0.41
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.520	ug/L	104	(50-150)		
MRLLW	Vinyl chloride (VC)		0.25	0.280	ug/L	112	(50-150)		
QC Ref# 836111 - Fluoride by SM 4500F-C						**Analysis Date: 05/01/2015**			
LCS1	Fluoride		1	1.03	mg/L	103	(81-116)		
LCS2	Fluoride		1	1.03	mg/L	103	(81-116)	20	0.0
MBLK	Fluoride			<0.05	mg/L				
MRL_CHK	Fluoride		0.05	0.0477	mg/L	95	(50-150)		
MS_201504300057	Fluoride	ND	1	1.03	mg/L	100	(80-120)		
MS_201504300011	Fluoride	ND	1	0.999	mg/L	100	(80-120)		
MSD_201504300011	Fluoride	ND	1	1.02	mg/L	102	(80-120)	20	2.1
MSD_201504300057	Fluoride	ND	1	1.03	mg/L	100	(80-120)	20	0.0
QC Ref# 836624 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 05/02/2015**			
MBLK	NDMA-D6 (S)			74.9	%	75	(70-130)		
MRL_CHK	NDMA-D6 (S)		20	77.5	%	78	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2	1.72	ng/L	86	(50-150)		
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/L				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2	1.43	ng/L	72	(50-150)		
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/L				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2	1.71	ng/L	86	(50-150)		
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/L				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2	1.80	ng/L	90	(50-150)		
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/L				
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2	1.64	ng/L	82	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory QC
Report: 531831

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	N-Nitrosomorpholine			<2	ng/l				
MRL_CHK	N-Nitrosomorpholine		2	2.07	ng/l	104	(50-150)		
MBLK	N-Nitrosopiperidine (NPIP)			<2	ng/L				
MRL_CHK	N-Nitrosopiperidine (NPIP)		2	1.63	ng/L	81	(50-150)		
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/L				
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2	1.65	ng/L	83	(50-150)		
QC Ref# 836627 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 05/04/2015**			
LCS3	NDMA-D6 (S)		20	108	%	108	(70-130)		
MS2_201504240208	NDMA-D6 (S)		20	103	%	103	(70-130)		
MSD2_201504240208	NDMA-D6 (S)		20	98.4	%	98	(70-130)		
LCS3	N-Nitroso dimethylamine (NDMA)		80	71.2	ng/L	89	(70-130)		
MS2_201504240208	N-Nitroso dimethylamine (NDMA)	ND	40	35.0	ng/L	87	(70-130)		
MSD2_201504240208	N-Nitroso dimethylamine (NDMA)	ND	40	33.9	ng/l	85	(70-130)	30	3.2
LCS3	N-Nitrosodibutylamine (NDBA)		80	67.6	ng/L	84	(70-130)		
MS2_201504240208	N-Nitrosodibutylamine (NDBA)	ND	40	33.9	ng/L	84	(70-130)		
MSD2_201504240208	N-Nitrosodibutylamine (NDBA)	ND	40	31.8	ng/l	79	(70-130)	30	6.4
LCS3	N-Nitrosodiethylamine (NDEA)		80	75.1	ng/L	94	(70-130)		
MS2_201504240208	N-Nitrosodiethylamine (NDEA)	ND	40	33.9	ng/L	83	(70-130)		
MSD2_201504240208	N-Nitrosodiethylamine (NDEA)	ND	40	33.2	ng/L	81	(70-130)	30	2.1
LCS3	N-Nitrosodi-n-propylamin(NDPA)		80	81.3	ng/L	102	(70-130)		
MS2_201504240208	N-Nitrosodi-n-propylamin(NDPA)	ND	40	35.2	ng/L	85	(70-130)		
MSD2_201504240208	N-Nitrosodi-n-propylamin(NDPA)	ND	40	35.9	ng/l	87	(70-130)	30	2.0
LCS3	N-Nitrosomethylethylamin(NMEA)		80	71.3	ng/L	89	(70-130)		
MS2_201504240208	N-Nitrosomethylethylamin(NMEA)	ND	40	35.2	ng/L	88	(70-130)		
MSD2_201504240208	N-Nitrosomethylethylamin(NMEA)	ND	40	34.7	ng/L	87	(70-130)	30	1.4
LCS3	N-Nitrosomorpholine		80	73.4	ng/l	92	(70-130)		
MS2_201504240208	N-Nitrosomorpholine		40	34.1	ng/l	85	(70-130)		
MSD2_201504240208	N-Nitrosomorpholine		40	35.1	ng/l	88	(70-130)	30	2.9
LCS3	N-Nitrosopiperidine (NPIP)		80	70.0	ng/L	88	(70-130)		
MS2_201504240208	N-Nitrosopiperidine (NPIP)		40	34.5	ng/L	86	(70-130)		
MSD2_201504240208	N-Nitrosopiperidine (NPIP)		40	33.6	ng/l	84	(70-130)	30	2.6
LCS3	N-Nitrosopyrollidine (NPYR)		80	71.0	ng/L	89	(70-130)		
MS2_201504240208	N-Nitrosopyrollidine (NPYR)	ND	40	37.6	ng/L	94	(70-130)		
MSD2_201504240208	N-Nitrosopyrollidine (NPYR)	ND	40	35.6	ng/L	89	(70-130)	30	5.5
QC Ref# 836841 - 1,4-Dioxane by EPA 522						**Analysis Date: 05/05/2015**			
LCS1	Dioxane		20	18.3	ug/L	92	(70-130)		
MBLK	Dioxane			<1	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory QC
Report: 531831

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLLW	Dioxane		0.07	0.0760	ug/L	109	(50-150)		
MS1_201504270074	Dioxane	1.3	0.07	1.35	ug/L	69	(50-150)		
MSD1_201504270074	Dioxane	1.3	0.07	1.46	ug/L	**231**	(50-150)	20	7.8
LCS1	Dioxane-d8 (S)			92.8	%	93	(70-130)		
MBLK	Dioxane-d8 (S)			94.8	%	95	(70-130)		
MRLLW	Dioxane-d8 (S)			97.7	%	98	(70-130)		
MS1_201504270074	Dioxane-d8 (S)			89.8	%	90	(70-130)		
MSD1_201504270074	Dioxane-d8 (S)			93.8	%	94	(70-130)		
QC Ref# 837189 - Disinfection ByProducts by 300.0 by EPA 300.0						**Analysis Date: 05/07/2015**			
LCS1	Chlorate by IC		200	199	ug/L	100	(90-110)		
LCS2	Chlorate by IC		200	203	ug/L	101	(90-110)	20	2.0
MBLK	Chlorate by IC			<10	ug/L				
MRL_CHK	Chlorate by IC		10	10.1	ug/L	101	(75-125)		
MS_201504300031	Chlorate by IC	ND	100	98.7	ug/L	99	(80-120)		
MS_201505050590	Chlorate by IC	ND	100	101	ug/L	97	(80-120)		
MSD_201504300031	Chlorate by IC	ND	100	97.9	ug/L	98	(80-120)	15	0.81
MSD_201505050590	Chlorate by IC	ND	100	103	ug/L	98	(80-120)	15	2.0
QC Ref# 837297 - 1,2,3-Trichloropropane (SIM) by CASRL 524M-TCP						**Analysis Date: 05/07/2015**			
DUP_201505050153	1,2,3-Trichloropropane	0.0343	0.005	0.0323	ug/L		(0-20)	20	5.9
DUP_201505060552	1,2,3-Trichloropropane	ND	0.005	ND	ug/L		(0-20)		
LCS1	1,2,3-Trichloropropane		0.01	0.0107	ug/L	107	(80-120)		
LCS2	1,2,3-Trichloropropane		0.01	0.0106	ug/L	106	(80-120)	20	0.94
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.005	0.00577	ug/L	115	(50-150)		
DUP_201505050153	Toluene-d8 (S)		130	98.6	%	99	(70-130)		
DUP_201505060552	Toluene-d8 (S)		130	93.4	%	93	(70-130)		
LCS1	Toluene-d8 (S)		130	103	%	103	(70-130)		
LCS2	Toluene-d8 (S)		130	95.8	%	96	(70-130)		
MBLK	Toluene-d8 (S)			99.8	%	100	(70-130)		
MBLK	Toluene-d8 (S)			95.8	%	96	(70-130)		
MRL_CHK	Toluene-d8 (S)		130	97.8	%	98	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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CLIENT: **EUROFINS EATON ANALYTICAL**

PROJECT: **531831**

SDG: **15D192**

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GC/MS-SVOA	**	3000 –
GC-VOA	**	4000 –
GC-SVOA	**	5000 –
HPLC	METHOD 8330	6000 – 6007
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 05-12-2015
EMAX Batch No.: 15D192

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 531831

Enclosed is the Laboratory report for samples received on 04/29/15.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
201504270332	D192-01	04/27/15	WATER	NITROAROMATICS & NITRAMINES

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

eurofins | Eaton Analytical

Submittal Form & Purchase Order 99-34725

KD192

Date: 4/28/2015

REPORTING REQUIRMENTS:** ***Do Not Combine Reports with any other samples submitted under different Folder Numbers!
Report & Invoice must have the Folder # **531831** Sub PO# **99-34725** and Job # **1000014**

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Ship To:
EMAX Laboratories, Inc.
1835 W. 205th St.

Torrance, CA 90501

Phone: 310-618-8889 Fax: 310-618-0818

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified State Certification # & Exp Date for requested tests + matrix.

Samples from: **CALIFORNIA**

Folder #:	Report Due:	Sub PO #:
531831	05/13/2015	99-34725

JLS	Client Sample ID for reference only	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
	201504270332 MW-3-2		04/27/15 1210	DW		
EPA 8330	@8330EDD Emax	@8330EDD Emax				

Relinquished by: Sample Control Date 4/28/15 Time 0815

Received by: Date Time

Relinquished by: Sample Control Date Time

Received by: Date 04-29-15 Time 0930

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	
☑ Fedex ☐ UPS ☐ GSO ☐ Others	6376 7626 0407	ECN 15D192
☐ EMAX Courier ☐ Client Delivery		Recipient Sherifama
		Date 04-29-15 Time 0930

COC INSPECTION

☑ Client Name ☑ Client PM/FC ☐ Sampler Name ☑ Sampling Date/Time ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☐ Courier Signature ☑ Analysis Required ☐ Preservative (if any) ☑ TAT
Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required

Note:

PACKAGING INSPECTION

Container ☑ Cooler ☐ Box ☐ Other
Condition ☐ Custody Seal ☐ Intact ☐ Damaged
Packaging ☑ Bubble Pack ☐ Styrofoam ☐ Popcorn ☑ Sufficient ☐ _____
Temperatures (Cool, ≤6 °C but not frozen) ☑ Cooler 1 3.9 °C ☐ Cooler 2 _____ °C ☐ Cooler 3 _____ °C ☐ Cooler 4 _____ °C ☐ Cooler 5 _____ °C
☐ Cooler 6 _____ °C ☐ Cooler 7 _____ °C ☐ Cooler 8 _____ °C ☐ Cooler 9 _____ °C ☐ Cooler 10 _____ °C
Thermometer: A - S/N _____ B - S/N 140252070 C - S/N 140252067 D - S/N _____
FM 4/29/15

Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.**

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action

4/29/15 NS 4/29/15

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

☐ **Continue to next page.**

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in _____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in _____	D16	Preservation not indicated in _____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in _____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	_____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	_____
D10	No initial/date on corrections in COC/label	D22	_____	R10	_____
D11	Container count mismatch COC vs received	D23	_____	R11	_____
D12	Container size mismatch COC vs received	D24	_____	R12	_____

REVIEWS:

Sample Labeling Date 04-29-15 / 4/29/15

SRF Date 4/29/15

PM Date 4/29/15

ORIGIN ID:WHPA (626) 386-1100
KARLOS RUECKER
EUROFINS EATON ANALYTICAL
750 ROYAL OAKS DR SUITE 100

MONROVIA, CA 91016
UNITED STATES US

SHIP DATE: 28APR15
ACTWGT: 31.9 LB
CAD: 31999/CAFE2807
DIMS: 15x12x14 IN

BILL SENDER

TO SAMPLE RECEIVING
EMAX LABORATORIES, INC.
1835 W. 205TH STREET

TORRANCE CA 90501
PO: JGS
(310) 618-8889 X 116
DEPT: SAMPLE PREP. / SHIPPING

FedEx Express

WED - 29 APR 10:30A
PRIORITY OVERNIGHT

TRK# 0201 6376 7626 0407

90501
CA-US LAX

92 HHRA

Part # 156397-434 NRNT 01/15

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

531831

METHOD 8330
EXPLOSIVES

SDG#: 15D192

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 531831

SDG : 15D192

METHOD 8330
EXPLOSIVES

One (1) water sample was received on 04/29/15 to be analyzed for Explosives in accordance with Method 8330 and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. EXD020WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. EXD020WL/EXD020WC - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : EUROFINS EATON ANALYTICAL
Project : 531831

SDG NO. : 15D192
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXD020WB	1	NA	04/29/1521:25	04/29/1515:12	XD27100A	XD27099A	EXD020W	Method Blank
LCS1W	EXD020WL	1	NA	04/29/1522:00	04/29/1515:12	XD27101A	XD27099A	EXD020W	Lab Control Sample (LCS)
LCD1W	EXD020WC	1	NA	04/29/1522:34	04/29/1515:12	XD27102A	XD27099A	EXD020W	LCS Duplicate
201504270332	D192-01	1	NA	04/30/1500:16	04/29/1515:12	XD27105A	XD27099A	EXD020W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/27/15
Project	: 531831	Date Received:	04/29/15
Batch No.	: 15D192	Date Extracted:	04/29/15 15:12
Sample ID:	201504270332	Date Analyzed:	04/30/15 00:16
Lab Samp ID:	D192-01	Dilution Factor:	1
Lab File ID:	XD27105A	Matrix	: WATER
Ext Btch ID:	EXD020W	% Moisture	: NA
Calib. Ref.:	XD27099A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.74	4.000	93.5	30-160

Note: All positive results are confirmed by Biphenyl column

QC SUMMARIES

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	NA
Project	: 531831	Date Received:	04/29/15
Batch No.	: 15D192	Date Extracted:	04/29/15 15:12
Sample ID:	MBLK1W	Date Analyzed:	04/29/15 21:25
Lab Samp ID:	EXD020WB	Dilution Factor:	1
Lab File ID:	XD27100A	Matrix :	WATER
Ext Btch ID:	EXD020W	% Moisture :	NA
Calib. Ref.:	XD27099A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.87	4.000	96.8	70-140

Note: All positive results are confirmed by Biphenyl column

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 531831
BATCH NO.: 15D192
METHOD: METHOD 8330

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	EXD020WB	EXD020WL	EXD020WC		
LAB FILE ID:	XD27100A	XD27101A	XD27102A		
DATE EXTRACTED:	04/29/1515:12	04/29/1515:12	04/29/1515:12	DATE COLLECTED:	NA
DATE ANALYZED:	04/29/1521:25	04/29/1522:00	04/29/1522:34	DATE RECEIVED:	04/29/15
PREP. BATCH:	EXD020W	EXD020W	EXD020W		
CALIB. REF:	XD27099A	XD27099A	XD27099A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
HMX	ND	4.00	3.63	91	4.00	3.51	88	3	60-130	30
RDX	ND	4.00	3.27	82	4.00	3.25	81	1	60-130	30
1,3,5-TNB	ND	4.00	3.98	100	4.00	3.78	94	5	30-130	30
1,3-DNB	ND	4.00	3.68	92	4.00	3.54	89	4	60-130	30
Tetryl	ND	4.00	4.32	108	4.00	4.15	104	4	70-130	30
Nitrobenzene	ND	4.00	3.31	83	4.00	3.40	85	3	60-130	30
2,4,6-TNT	ND	4.00	3.94	99	4.00	4.01	100	2	70-130	30
4-AM-2,6-DNT	ND	4.00	3.68	92	4.00	3.68	92	0	70-130	30
2-AM-4,6-DNT	ND	4.00	3.84	96	4.00	3.86	97	0	70-130	30
2,6-DNT	ND	4.00	3.90	98	4.00	3.95	99	1	70-130	30
2,4-DNT	ND	4.00	4.01	100	4.00	3.95	99	2	70-130	30
2-Nitrotoluene	ND	4.00	3.45	86	4.00	3.44	86	0	70-130	30
3-Nitrotoluene	ND	4.00	3.95	99	4.00	3.97	99	1	70-130	30
4-Nitrotoluene	ND	4.00	3.83	96	4.00	3.54	88	8	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
3,4-Dinitrotoluene	4.00	4.57	114	4.00	4.38	110	70-140

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

ORELAP 4034

AT-1807

Laboratory Report

for

Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109
Attention: David Conner

Date of Issue
05/19/2015

EUROFINS EATON
ANALYTICAL

DST: David S Tripp

Project Manager

Report: 532016
Project: TIDEWATER
Group: 2Q15 JPL Triannual
PO#: Sampling

* Accredited in accordance with TNI 2009 and ISO/IEC 17025:2005.
* Laboratory certifies that the test results meet all **TNI 2009 and ISO/IEC 17025:2005** requirements unless noted under the individual analysis.
* Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.
* Test results relate only to the sample(s) tested.

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STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	**Mississippi**	Certified
Alaska	CA00006	**Montana**	Cert 0035
Arizona	AZ0778	**Nebraska**	Certified
Arkansas	Certified	**Nevada**	CA00006-2014-1
California-Monrovia-ELAP	2813	**New Hampshire ***	2959
California-Colton- ELAP	2812	**New Jersey ***	CA 008
California-Folsom- ELAP	2820	**New Mexico**	Certified
Colorado	Certified	**New York ***	11320
Connecticut	PH-0107	**North Carolina**	06701
Delaware	CA 006	**North Dakota**	R-009
Florida *	E871024	**Oregon (Primary AB) ***	**ORELAP 4034**
Georgia	947	**Pennsylvania ***	68-565
Guam	14-003r	**Rhode Island**	LAO00326
Hawaii	Certified	**South Carolina**	87016
Idaho	Certified	**South Dakota**	Certified
Illinois *	200033	**Tennessee**	TN02839
Indiana	C-CA-01	**Texas ***	T104704230-14-7
Kansas *	E-10268	**Utah ***	CA000062014-7
Kentucky	90107	**Vermont**	VT0114
Louisiana *	LA140009	**Virginia ***	460260
Maine	CA0006	**Washington**	C838
Maryland	224	**West Virginia**	9943 C
Commonwealth of Northern Marianas Is.	MP0004	**Wisconsin**	998316660
Massachusetts	M-CA006	**Wyoming**	8TMS-L
Michigan	9906	**EPA Region 5**	Certified
Los Angeles County Sanitation Districts	10264		

* NELAP/TNI Recognized Accreditation Bodies

The tests listed below are accredited and meet the requirements of ISO 17025 as verified by the ANSI-ASQ National Accreditation Board/ACLASS.
Refer to Certificate and scope of accreditation (AT 1807) found at: http://www.eatonanalytical.com

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
1,4-Dioxane	EPA 522	x	x	
2,3,7,8-TCDD	Modified EPA 1613B	x	x	
Acrylamide	In House Method	x	x	
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H (18th)		x	x
Anions and DBPs by IC	EPA 300.0	x	x	x
Anions and DBPs by IC	EPA 300.1	x	x	
Asbestos	EPA 100.2	x		
Bicarbonate Alkalinity as HCO3	SM 2330B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method	x	x	
Carbamates	EPA 531.2	x	x	
Carbonate as CO3	SM 2330B	x	x	x
Carbonyls	EPA 556	x	x	
COD	EPA 410.4 / SM 5220D			x
Chloramines	SM 4500-CL G	x	x	x
Chlorinated Acids	EPA 515.4	x	x	
Chlorinated Acids	EPA 555	x	x	
Chlorine Dioxide	SM 4500-CLO2 D	x	x	
Chlorine -Total/Free/ Combined Residual	SM 4500-Cl G	x	x	x
Conductivity	EPA 120.1			x
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	x	x	
Cyanide, Amenable	SM 4500-CN G	x		x
Cyanide, Free	SM 4500CN F	x	x	x
Cyanide, Total	EPA 335.4	x	x	x
Cyanogen Chloride (screen)	In House Method	x	x	
Diquat and Paraquat	EPA 549.2	x	x	
DBP/HAA	SM 6251B	x	x	
Dissolved Oxygen	SM 4500-O G		x	x
E. Coli	(MTF/EC+MUG)	x		
E. Coli	CFR 141.21(f)(6)(i)		x	x
E. Coli	SM 9223			x
E. Coli (Enumeration)	SM 9221B.1/ SM 9221F	x	x	
E. Coli (Enumeration)	SM 9223B	x	x	
EDB/DCBP	EPA 504.1	x		
EDB/DBCP and DBP	EPA 551.1	x	x	
EDTA and NTA	In House Method	x	x	
Endothall	EPA 548.1	x	x	
Enterococci	SM 9230B	x		x
Fecal Coliform	SM 9221 E (MTF/EC)	x		
Fecal Coliform	SM 9221C, E (MTF/EC)			x
Fecal Coliform (Enumeration)	SM 9221E (MTF/EC)	x	x	
Fecal Coliform with Chlorine Present	SM 9221E			x
Fecal Streptococci	SM 9230B	x		x
Fluoride	SM 4500-F C	x	x	x
Glyphosate	EPA 547	x	x	
Gross Alpha/Beta	EPA 900.0	x	x	x
HAAs/ Dalapon	EPA 552.3	x	x	
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method	x	x	
Heterotrophic Bacteria	SM 9215 B	x	x	
Hexavalent Chromium	EPA 218.6	x	x	x
Hexavalent Chromium	EPA 218.7	x	x	
Hexavalent Chromium	SM 3500-Cr B or C (20th)			x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
Hormones	EPA 539	x	x	
Hydroxide as OH Calc.	SM 2330B	x	x	
Kjeldahl Nitrogen	EPA 351.2			x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA	x	x	
NDMA	EPA 521	x	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x	x
OCL, Pesticides/PCB	EPA 505	x	x	
Ortho Phosphate	EPA 365.1	x	x	
Ortho Phosphate and Total Phosphorous	EPA 365.1/SM 4500-P E			x
Ortho Phosphorous	SM 4500P E	x	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	x	
Perchlorate	EPA 331.0	x	x	
Perchlorate	EPA 314.0	x	x	
Perfluorinated Alkyl Acids	EPA 537	x	x	
pH	EPA 150.1	x		
pH	SM 4500-H+B	x	x	x
Phenylurea Pesticides/ Herbicides	In House Method	x	x	
Pseudomonas	IDEXX Pseudalert	x	x	
Radium-226	RA-226 GA	x	x	
Radium-228	RA-228 GA	x	x	
Radon-222	SM 7500RN	x	x	
Residue, Filterable	SM 2540C	x	x	x
Residue, Non-filterable	SM 2540D			x
Residue, Total	SM 2540B		x	x
Residue, Volatile	EPA 160.4			x
Semi-VOC	EPA 525.2	x	x	
Semi-VOC	EPA 625	x	x	x
Silica	SM 4500-Si D	x	x	x
Silica	SM 4500-SiO2 C	x		x
Sulfide	SM 4500-$S^{=}$ D			x
Sulfite	SM 4500-SO^{3}B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x	x	
Total Coliform	SM 9221 A, B	x	x	
Total Coliform (Enumeration)	SM 9221 A, B, C	x	x	
Total Coliform / E. coli	Colisure	x	x	
Total Coliform	SM 9221B			x
Total Coliform with Chlorine Present	SM 9221B			x
Total Coliform / E.coli	SM 9223	x	x	
TOC	SM 5310C		x	x
TOC/DOC	SM 5310C	x	x	
TOX	SM 5320B			x
Total Phenols	EPA 420.1			x
Total Phenols	EPA 420.4	x	x	x
Total Phosphorous	SM 4500 P F			x
Turbidity	EPA 180.1	x	x	x
Turbidity	SM 2130B	x		x
Uranium by ICP/MS	EPA 200.8	x	x	
UV 254	SM 5910B	x		
VOC	EPA 524.2/EPA 524.3	x	x	
VOC	EPA 624	x	x	x
VOC	EPA SW 846 8260	x	x	
VOC	In House Method	x	x	
Yeast and Mold	SM 9610	x	x	

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Acknowledgement of Samples Received

Addr: **Tidewater, Inc.**
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena91109
Attn: David Conner
Phone: 619-726-7311

Client ID: JPL-CA
Folder #: 532016
Project: TIDEWATER
Sample Group: 2Q15 JPL Triannual Sampling

Project Manager: David S Tripp
Phone: (626) 386-1158
PO #: 1213-000-05

The following samples were received from you on **April 28, 2015** at **20:11**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
201504290184	MW-18-4	04/28/2015 0730

@ANIONS48	@8330EDD EMAX	@DIOXANE
@ML521_SPE8	@TCP-524	@VOASDWA
@VOA-TBA	Chlorate by IC	Fluoride
Hexavalent chromium(Dissolved)		

Test Description

@ANIONS48 -- Nitrate, Nitrite by EPA 300.0

@8330EDD EMAX -- @8330EDD Emax

@DIOXANE -- 1,4-Dioxane

@ML521_SPE8 -- Nitrosamines by GCMS

@TCP-524 -- 1,2,3-Trichloropropane (SIM)

@VOASDWA -- Volatile Organics by GCMS

@VOA-TBA -- TBA by EPA 524.2 Modified

750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (626) 386-1101 http://www.EatonAnalytical.com

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CHAIN OF CUSTODY RECORD

532016

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: 2.8-1-2.7 #424A

SAMPLES CHECKED AGAINST COC BY: @

SAMPLES LOGGED IN BY: JJ

SAMPLES REC'D DAY OF COLLECTION? ☑ (check for yes)

SAMPLE TEMP RECEIVED AT:

☐ Colton / No. California / Arizona _____ °C (Compliance: 4 ± 2 °C)

☑ Monrovia 2.7 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen — Partially Frozen _____ Thawed _____ Wet Ice _____ No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: JPL-CA

PROJECT CODE: TIDEWATER bottle order

EEA CLIENT CODE:

COC ID:

SAMPLE GROUP: Blaine Tech

TAT requested: rush by adv notice only STD ☒ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)
REGULATION INVOLVED: _____

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA,...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☒ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	SAMPLER COMMENTS
4-28-15	0730	MW-18-4		RGW			
		@ 10:11 APR 28 2015 Michael Uribe Eurofins Eaton Analytical					

*** MATRIX TYPES:** **RSW** = Raw Surface Water **CFW** = Chlor(am)inated Finished Water **SEAW** = Sea Water **BW** = Bottled Water **SO** = Soil **O** = Other - Please Identify
RGW = Raw Ground Water **FW** = Other Finished Water **WW** = Waste Water **SW** = Storm Water **SL** = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	Andy Wolff	Andy Wolff	Blaine Tech / Area Supervisor	4-28-15	0730
RELINQUISHED BY:	Andy Wolff	"	"	4-28-15	1500
RECEIVED BY:	Nicole	Nicole	Blaine Tech Services	"	1500
RELINQUISHED BY:	Nicole	Nicole	"	"	
RECEIVED BY:	[illegible]	L. Paxton	EEA	4-28-15	3:50
	@			4-28-15	

QA FO 0029 (06/26/2013) PAGE 1 OF 1

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formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
(626) 386-1100 FAX (626) 386-1101

Kit Order for Jet Propulsion Laboratory

David S Tripp is your Eurofins Eaton Analytical Project Manager

Note: Sampler Please return this paper with your samples

Kit #: 110244
Created By: ADT
Deliver By: 04/10/2015
STG: Bottle Orders
Ice Type: W

Client ID: JPL-CA
Project Code: TIDEWATER Bottle Orders
Group Name: 2Q15 JPL Triannual Sampling
PO#/JOB#: 1213-000-05

Ship Sample Kits to
Jet Propulsion Laboratory
20735 Belshaw Avenue
Carson, CA 90746

Attn: Robert Sunjara
Phone: 310-885-4455 x 115

Send Report to
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

Billing Address
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

# of Sample	Tests	Bottles - Qty for each sample, type & preservative if ai	UN DOT #
7	@8330EDD EMAX	2 1L amber glass 1ml thio (8%)	
7	@ANIONS48, Fluoride	1 125ml poly no preservative	
7	@DIOXANE	3 125ml amber glass 6.25 Sulfite +125 mg Bisulfite	
7	@ML521_SPE8	3 500ml amber glass 40-50 mg Na Thiosulfate	
7	@VOASDWA	3 40ml amber glass vial 4drops 6N HCL (36%)	UN1789
7	@VOA-TBA	4 40ml amber glass vial TBA_4 drops 1:1 HCL	UN1789
7	Chlorate by IC	1 60mL poly 0.6mL 1% EDA solution	
7	Hexavalent Chromium (Dissolved)	1 125ml poly 1.25 ml NH4SO4/NH4OH buffer	

Comments

One set per cooler

Code	Status	Date Shipped	Via	Tracking #	# of Coolers

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Hits
Report: 532016

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/28/2015 20:11

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201504290184	**MW-18-4**				
05/08/2015 18:34	1,2,3-Trichloropropane		0.0357		ug/L	0.005
05/02/2015 17:24	Carbon Tetrachloride		5.8	5	ug/L	0.5
05/07/2015 14:43	Chlorate by IC		10		ug/L	10
05/05/2015 19:36	Chloroform (Trichloromethane)		0.81		ug/L	0.5
05/07/2015 16:18	Fluoride		0.52	4	mg/L	0.05
04/30/2015 12:11	Hexavalent chromium(Dissolved)		0.53		ug/L	0.02
04/29/2015 14:06	Nitrate as Nitrogen by IC		0.80	10	mg/L	0.1
04/29/2015 14:06	Nitrate as NO3 (calc)		3.6	45	mg/L	0.44
05/02/2015 17:24	Tetrachloroethylene (PCE)		2.3	5	ug/L	0.5
05/02/2015 17:24	Total THM		0.81	80	ug/L	0.5
05/02/2015 17:24	Trichloroethylene (TCE)		2.1	5	ug/L	0.5

SUMMARY OF POSITIVE DATA ONLY

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 532016

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/28/2015 20:11

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
MW-18-4 (201504290184)						**Sampled on 04/28/2015 0730**		
		EPA 522 - 1,4-Dioxane						
4/30/2015	05/05/2015 22:43	836841	(EPA 522)	1,4-Dioxane	ND	ug/L	1	1
4/30/2015	05/05/2015 22:43	836841	(EPA 522)	Dioxane-d8	94	%		1
		EPA 521 - Nitrosamines by GCMS						
5/1/2015	05/17/2015 21:37	839102	(EPA 521)	N-Nitrosodibutylamine (NDBA)	ND	ng/L	2	1
5/1/2015	05/17/2015 21:37	839102	(EPA 521)	N-Nitrosodiethylamine (NDEA)	ND	ng/L	2	1
5/1/2015	05/17/2015 21:37	839102	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
5/1/2015	05/17/2015 21:37	839102	(EPA 521)	N-Nitrosodi-n-propylamine (NDPA)	ND	ng/L	2	1
5/1/2015	05/17/2015 21:37	839102	(EPA 521)	N-Nitrosomethylethylamine (NMEA)	ND	ng/L	2	1
5/1/2015	05/17/2015 21:37	839102	(EPA 521)	N-Nitrosomorpholine	ND	ng/l	2	1
5/1/2015	05/17/2015 21:37	839102	(EPA 521)	N-Nitrosopiperidine (NPIP)	ND	ng/L	2	1
5/1/2015	05/17/2015 21:37	839102	(EPA 521)	N-Nitrosopyrollidine (NPYR)	ND	ng/L	2	1
5/1/2015	05/17/2015 21:37	839102	(EPA 521)	NDMA-D6	126	%		1
		EPA 218.6 - Hexavalent chromium(Dissolved)						
	04/30/2015 12:11	835964	(EPA 218.6)	Hexavalent chromium(Dissolved)	0.53	ug/L	0.02	1
		EPA 300.0 - Nitrate, Nitrite by EPA 300.0						
	04/29/2015 14:06	835611	(EPA 300.0)	Nitrate as Nitrogen by IC	0.80	mg/L	0.1	1
	04/29/2015 14:06	835611	(EPA 300.0)	Nitrate as NO3 (calc)	3.6	mg/L	0.44	1
		EPA 300.0 - Disinfection ByProducts by 300.0						
	05/07/2015 14:43	837189	(EPA 300.0)	Chlorate by IC	10	ug/L	10	1
		EPA 8330 - @8330EDD Emax						
	05/06/2015 16:07		(EPA 8330)	1,3,5-TNB	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	1,3-DNB	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	2,4,6-TNT	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	2,4-DNT	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	2,6-DNT	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	2-AM-4,6DNT	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	2-Nitrotoluene	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	3-Nitrotoluene	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	4-AM-2,6-DNT	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	4-Nitrotoluene	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	HMX	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	Nitrobenzene	ND	ug/L	0.4	1
	05/06/2015 16:07		(EPA 8330)	RDX	ND	ug/L	0.4	1

Rounding on totals after summation.
(c) - indicates calculated results

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1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 532016

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/28/2015 20:11

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/06/2015	16:07		(EPA 8330)	Tetryl	ND	ug/L	0.4	1
	05/06/2015	16:07		(EPA 8330)	3,4-Dinitrotoluene	98	%		1
		EPA 524.2 - Volatile Organics by GCMS							
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,2,3-Trichlorobenzene	ND (LE)	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,2,4-Trichlorobenzene	ND (LE)	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Benzene	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Bromobenzene	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Bromoethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Bromoform	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Carbon Tetrachloride	5.8	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Chlorodibromomethane	ND (LE)	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Chloroethane	ND	ug/L	0.5	1
5/2/2015	05/05/2015	19:36	836682	(EPA 524.2)	Chloroform (Trichloromethane)	0.81	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.5	1

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Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Dibromomethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Dichloromethane	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Naphthalene	ND (LE)	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	o-Xylene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	p-Chlorotoluene	ND (LE)	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Styrene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Tetrachloroethylene (PCE)	2.3	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Toluene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Total THM	0.81	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Total xylenes	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Trichloroethylene (TCE)	2.1	ug/L	0.5	1
5/2/2015	05/02/2015 17:24	836243	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.5	1

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Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.5	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.3	1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	1,2-Dichloroethane-d4	108	%		1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	4-Bromofluorobenzene	102	%		1
5/2/2015	05/02/2015	17:24	836243	(EPA 524.2)	Toluene-d8	95	%		1
		CASRL 524M-TCP - 1,2,3-Trichloropropane (SIM)							
5/8/2015	05/08/2015	18:34	837703	(CASRL 524M-TCP)	1,2,3-Trichloropropane	0.0357	ug/L	0.005	1
5/8/2015	05/08/2015	18:34	837703	(CASRL 524M-TCP)	Toluene-d8	95	%		1
		EPA 524.2 SIM - TBA by EPA 524.2 Modified							
4/30/2015	04/30/2015	17:32	835946	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2	1
4/30/2015	04/30/2015	17:32	835946	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	108	%		1
4/30/2015	04/30/2015	17:32	835946	(EPA 524.2 SIM)	4-Bromofluorobenzene	90	%		1
4/30/2015	04/30/2015	17:32	835946	(EPA 524.2 SIM)	Toluene-d8	94	%		1
		SM 4500F-C - Fluoride							
	05/07/2015	16:18	837115	(SM 4500F-C)	Fluoride	0.52	mg/L	0.05	1

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Laboratory Comments
Report: 532016

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Folder Comments

Analytical results for 8330 are submitted by Emax Laboratories, Inc. Torrance, CA, CA
Certification No. 02116CA

Flags Legend:

LE - MRL Check recovery was above laboratory acceptance limits.

The Comments Report may be blank if there are no comments for this report.

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Tidewater, Inc.

QC Ref # 835611 - Nitrate, Nitrite by EPA 300.0 **Analysis Date: 04/29/2015**
201504290184 MW-18-4 Analyzed by: CYP

QC Ref # 835946 - TBA by EPA 524.2 Modified **Analysis Date: 04/30/2015**
201504290184 MW-18-4 Analyzed by: KCP

QC Ref # 835964 - Hexavalent chromium(Dissolved) **Analysis Date: 04/30/2015**
201504290184 MW-18-4 Analyzed by: TLH

QC Ref # 836243 - Volatile Organics by GCMS **Analysis Date: 05/02/2015**
201504290184 MW-18-4 Analyzed by: KCP

QC Ref # 836682 - Volatile Organics by GCMS **Analysis Date: 05/05/2015**
201504290184 MW-18-4 Analyzed by: KAM

QC Ref # 836841 - 1,4-Dioxane **Analysis Date: 05/05/2015**
201504290184 MW-18-4 Analyzed by: JYH

QC Ref # 837115 - Fluoride **Analysis Date: 05/07/2015**
201504290184 MW-18-4 Analyzed by: MIA8

QC Ref # 837189 - Disinfection ByProducts by 300.0 **Analysis Date: 05/07/2015**
201504290184 MW-18-4 Analyzed by: NJR

QC Ref # 837703 - 1,2,3-Trichloropropane (SIM) **Analysis Date: 05/08/2015**
201504290184 MW-18-4 Analyzed by: KAM

QC Ref # 839102 - Nitrosamines by GCMS **Analysis Date: 05/17/2015**
201504290184 MW-18-4 Analyzed by: KDT

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Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 835611 - Nitrate, Nitrite by EPA 300.0 by EPA 300.0						**Analysis Date: 04/29/2015**			
LCS1	Nitrate as Nitrogen by IC		2.5	2.50	mg/L	100	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.51	mg/L	101	(90-110)	20	0.40
MBLK	Nitrate as Nitrogen by IC			<0.10	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0467	mg/L	93	(50-150)		
MRLLW	Nitrate as Nitrogen by IC		0.013	0.0140	mg/L	112	(50-150)		
MS_201504060068	Nitrate as Nitrogen by IC	2.6	6.5	8.92	mg/L	100	(80-120)		
MS_201504290318	Nitrate as Nitrogen by IC	0.30	1.3	1.59	mg/L	103	(80-120)		
MSD_201504060068	Nitrate as Nitrogen by IC	2.6	6.5	9.06	mg/L	102	(80-120)	20	1.5
MSD_201504290318	Nitrate as Nitrogen by IC	0.30	1.3	1.58	mg/L	103	(80-120)	20	0.63
QC Ref# 835946 - TBA by EPA 524.2 Modified by EPA 524.2 SIM						**Analysis Date: 04/30/2015**			
LCS1	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			108	%	108	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
LCS1	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS2	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MBLK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS1	t-Butyl Alcohol		5	4.57	ug/L	91	(70-130)		
LCS2	t-Butyl Alcohol		5	4.50	ug/L	90	(70-130)	20	1.5
MBLK	t-Butyl Alcohol			<1	ug/L				
MRL_CHK	t-Butyl Alcohol		2	2.44	ug/L	122	(50-150)		
LCS1	Toluene-d8 (S)			96.0	%	96	(70-130)		
LCS2	Toluene-d8 (S)			96.0	%	96	(70-130)		
MBLK	Toluene-d8 (S)			98.0	%	98	(70-130)		
MRL_CHK	Toluene-d8 (S)			96.0	%	96	(70-130)		
QC Ref# 835964 - Hexavalent chromium(Dissolved) by EPA 218.6						**Analysis Date: 04/30/2015**			
LCS1	Hexavalent chromium(Dissolved)		2	1.99	ug/L	100	(90-110)		
LCS2	Hexavalent chromium(Dissolved)		2	2.00	ug/L	100	(90-110)		
MBLK	Hexavalent chromium(Dissolved)			<0.020	ug/L				
MRL_CHK	Hexavalent chromium(Dissolved)		0.02	0.0159	ug/L	80	(50-150)		
MS_201504240198	Hexavalent chromium(Dissolved)	0.066	2	1.91	ug/L	92	(90-110)		
MS_201504280073	Hexavalent chromium(Dissolved)	ND	2	2.02	ug/L	101	(90-110)		
MSD_201504240198	Hexavalent chromium(Dissolved)	0.066	2	2.07	ug/L	100	(90-110)	20	8.0
MSD_201504280073	Hexavalent chromium(Dissolved)	ND	2	1.99	ug/L	99	(90-110)	20	1.5

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 836243 - Volatile Organics by GCMS by EPA 524.2						**Analysis Date: 05/02/2015**			
LCS1	1,1,1,2-Tetrachloroethane		5	4.27	ug/L	85	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	4.41	ug/L	88	(70-130)	20	3.2
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,1,2-Tetrachloroethane		0.5	0.660	ug/L	132	(50-150)		
LCS1	1,1,1-Trichloroethane		5	3.91	ug/L	78	(70-130)		
LCS2	1,1,1-Trichloroethane		5	3.82	ug/L	76	(70-130)	20	2.3
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,1-Trichloroethane		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,1,2,2-Tetrachloroethane		5	4.32	ug/L	86	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	4.36	ug/L	87	(70-130)	20	0.92
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,2,2-Tetrachloroethane		0.5	0.700	ug/L	140	(50-150)		
LCS1	1,1,2-Trichloroethane		5	4.07	ug/L	81	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.20	ug/L	84	(70-130)	20	3.1
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.630	ug/L	126	(50-150)		
LCS1	1,1-Dichloroethane		5	4.19	ug/L	84	(70-130)		
LCS2	1,1-Dichloroethane		5	4.31	ug/L	86	(70-130)	20	2.8
MBLK	1,1-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethane		0.5	0.630	ug/L	126	(50-150)		
LCS1	1,1-Dichloroethylene		5	4.15	ug/L	83	(70-130)		
LCS2	1,1-Dichloroethylene		5	4.26	ug/L	85	(70-130)	20	2.6
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.560	ug/L	112	(50-150)		
LCS1	1,1-Dichloropropene		5	4.18	ug/L	84	(70-130)		
LCS2	1,1-Dichloropropene		5	4.18	ug/L	84	(70-130)	20	0.0
MBLK	1,1-Dichloropropene			<0.5	ug/L				
MRL_CHK	1,1-Dichloropropene		0.5	0.560	ug/L	112	(50-150)		
LCS1	1,2,3-Trichlorobenzene		5	4.60	ug/L	92	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	4.87	ug/L	97	(70-130)	20	5.7
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,3-Trichlorobenzene		0.5	1.19	ug/L	**238**	(50-150)		
LCS1	1,2,3-Trichloropropane		5	3.97	ug/L	79	(70-130)		
LCS2	1,2,3-Trichloropropane		5	4.05	ug/L	81	(70-130)	20	2.0
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.5	0.650	ug/L	130	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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1 800 566 LABS (1 800 566 5227)

Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,2,4-Trichlorobenzene		5	4.57	ug/L	91	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	4.63	ug/L	93	(70-130)	20	1.3
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.780	ug/L	**156**	(50-150)		
LCS1	1,2,4-Trimethylbenzene		5	3.91	ug/L	78	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	3.86	ug/L	77	(70-130)	20	1.3
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trimethylbenzene		0.5	0.550	ug/L	110	(50-150)		
LCS1	1,2-Dichloroethane		5	4.34	ug/L	87	(70-130)		
LCS2	1,2-Dichloroethane		5	4.50	ug/L	90	(70-130)	20	3.6
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.540	ug/L	108	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			101	%	101	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			100	%	100	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)			100	%	100	(70-130)		
LCS1	1,2-Dichloropropane		5	4.17	ug/L	83	(70-130)		
LCS2	1,2-Dichloropropane		5	4.32	ug/L	86	(70-130)	20	3.5
MBLK	1,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,2-Dichloropropane		0.5	0.590	ug/L	118	(50-150)		
LCS1	1,3,5-Trimethylbenzene		5	3.74	ug/L	75	(70-130)		
LCS2	1,3,5-Trimethylbenzene		5	3.66	ug/L	73	(70-130)	20	2.2
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,3,5-Trimethylbenzene		0.5	0.510	ug/L	102	(50-150)		
LCS1	1,3-Dichloropropane		5	4.12	ug/L	82	(70-130)		
LCS2	1,3-Dichloropropane		5	4.33	ug/L	87	(70-130)	20	5.0
MBLK	1,3-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,3-Dichloropropane		0.5	0.610	ug/L	122	(50-150)		
LCS1	2,2-Dichloropropane		5	3.57	ug/L	71	(70-130)		
LCS2	2,2-Dichloropropane		5	3.60	ug/L	72	(70-130)	20	0.84
MBLK	2,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	2,2-Dichloropropane		0.5	0.630	ug/L	126	(50-150)		
LCS1	2-Butanone (MEK)		50	45.6	ug/L	91	(70-130)		
LCS2	2-Butanone (MEK)		50	45.7	ug/L	92	(70-130)	20	0.0
MBLK	2-Butanone (MEK)			<5.0	ug/L				
MRL_CHK	2-Butanone (MEK)		5	7.17	ug/L	143	(50-150)		
LCS1	4-Bromofluorobenzene (S)			95.6	%	96	(70-130)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
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Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	4-Bromofluorobenzene (S)			96.4	%	96	(70-130)		
MBLK	4-Bromofluorobenzene (S)			95.8	%	96	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			98.8	%	99	(70-130)		
MRLLW	4-Bromofluorobenzene (S)			103	%	103	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	50.9	ug/L	102	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	51.8	ug/L	104	(70-130)	20	1.8
MBLK	4-Methyl-2-Pentanone (MIBK)			<5	ug/L				
MRL_CHK	4-Methyl-2-Pentanone (MIBK)		5	6.52	ug/L	130	(50-150)		
LCS1	Benzene		5	4.35	ug/L	87	(70-130)		
LCS2	Benzene		5	4.48	ug/L	90	(70-130)	20	2.9
MBLK	Benzene			<0.5	ug/L				
MRL_CHK	Benzene		0.5	0.610	ug/L	122	(50-150)		
LCS1	Bromobenzene		5	4.17	ug/L	83	(70-130)		
LCS2	Bromobenzene		5	4.32	ug/L	86	(70-130)	20	3.5
MBLK	Bromobenzene			<0.5	ug/L				
MRL_CHK	Bromobenzene		0.5	0.680	ug/L	136	(50-150)		
LCS1	Bromochloromethane		5	4.08	ug/L	82	(70-130)		
LCS2	Bromochloromethane		5	4.12	ug/L	82	(70-130)	20	0.98
MBLK	Bromochloromethane			<0.5	ug/L				
MRL_CHK	Bromochloromethane		0.5	0.520	ug/L	104	(50-150)		
LCS1	Bromodichloromethane		5	4.27	ug/L	85	(70-130)		
LCS2	Bromodichloromethane		5	4.40	ug/L	88	(70-130)	20	3.0
MBLK	Bromodichloromethane			<0.5	ug/L				
MRL_CHK	Bromodichloromethane		0.5	0.620	ug/L	124	(50-150)		
LCS1	Bromoethane		5	4.40	ug/L	88	(70-130)		
LCS2	Bromoethane		5	4.59	ug/L	92	(70-130)	20	4.2
MBLK	Bromoethane			<0.5	ug/L				
MRL_CHK	Bromoethane		0.5	0.670	ug/L	134	(50-150)		
LCS1	Bromoform		5	4.41	ug/L	88	(70-130)		
LCS2	Bromoform		5	4.78	ug/L	96	(70-130)	20	8.1
MBLK	Bromoform			<0.5	ug/L				
MRL_CHK	Bromoform		0.5	0.670	ug/L	134	(50-150)		
LCS1	Bromomethane (Methyl Bromide)		5	4.44	ug/L	89	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	4.61	ug/L	92	(70-130)	20	3.8
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
MRL_CHK	Bromomethane (Methyl Bromide)		0.5	0.690	ug/L	138	(50-150)		
LCS1	Carbon disulfide		5	5.40	ug/L	108	(70-130)		
LCS2	Carbon disulfide		5	5.63	ug/L	113	(70-130)	20	4.2

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
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Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Carbon disulfide			<0.5	ug/L				
MRL_CHK	Carbon disulfide		0.5	0.540	ug/L	108	(50-150)		
LCS1	Carbon Tetrachloride		5	4.13	ug/L	83	(70-130)		
LCS2	Carbon Tetrachloride		5	4.18	ug/L	84	(70-130)	20	1.2
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.540	ug/L	108	(50-150)		
LCS1	Chlorobenzene		5	4.33	ug/L	87	(70-130)		
LCS2	Chlorobenzene		5	4.38	ug/L	88	(70-130)	20	1.1
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.660	ug/L	132	(50-150)		
LCS1	Chlorodibromomethane		5	4.59	ug/L	92	(70-130)		
LCS2	Chlorodibromomethane		5	4.58	ug/L	92	(70-130)	20	0.22
MBLK	Chlorodibromomethane			<0.5	ug/L				
MRL_CHK	Chlorodibromomethane		0.5	0.840	ug/L	**168**	(50-150)		
LCS1	Chloroethane		5	4.31	ug/L	86	(70-130)		
LCS2	Chloroethane		5	4.31	ug/L	86	(70-130)	20	0.0
MBLK	Chloroethane			<0.5	ug/L				
MRL_CHK	Chloroethane		0.5	0.640	ug/L	128	(50-150)		
LCS1	Chloroform (Trichloromethane)		5	4.17	ug/L	83	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.26	ug/L	85	(70-130)	20	2.1
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
MRL_CHK	Chloroform (Trichloromethane)		0.5	0.780	ug/L	**156**	(50-150)		
LCS1	Chloromethane(Methyl Chloride)		5	4.47	ug/L	89	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	4.49	ug/L	90	(70-130)	20	0.45
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
MRL_CHK	Chloromethane(Methyl Chloride)		0.5	0.730	ug/L	146	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	4.19	ug/L	84	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	4.33	ug/L	87	(70-130)	20	3.3
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.650	ug/L	130	(50-150)		
LCS1	cis-1,3-Dichloropropene		5	4.27	ug/L	85	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	4.42	ug/L	88	(70-130)	20	3.5
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	cis-1,3-Dichloropropene		0.5	0.690	ug/L	138	(50-150)		
LCS1	Dibromomethane		5	4.07	ug/L	81	(70-130)		
LCS2	Dibromomethane		5	4.33	ug/L	87	(70-130)	20	6.2
MBLK	Dibromomethane			<0.5	ug/L				
MRL_CHK	Dibromomethane		0.5	0.510	ug/L	102	(50-150)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Dichlorodifluoromethane		5	4.49	ug/L	90	(70-130)		
LCS2	Dichlorodifluoromethane		5	4.63	ug/L	93	(70-130)	20	3.1
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
MRL_CHK	Dichlorodifluoromethane		0.5	0.530	ug/L	106	(50-150)		
LCS1	Dichloromethane		5	4.33	ug/L	87	(70-130)		
LCS2	Dichloromethane		5	4.38	ug/L	88	(70-130)	20	1.1
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.700	ug/L	140	(50-150)		
LCS1	Di-isopropyl ether		5	4.48	ug/L	90	(70-130)		
LCS2	Di-isopropyl ether		5	4.51	ug/L	90	(70-130)	20	0.67
MBLK	Di-isopropyl ether			<3.0	ug/L				
MRL_CHK	Di-isopropyl ether		0.5	0.600	ug/L	120	(50-150)		
LCS1	Ethyl benzene		5	4.36	ug/L	87	(70-130)		
LCS2	Ethyl benzene		5	4.41	ug/L	88	(70-130)	20	1.1
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.610	ug/L	122	(50-150)		
LCS1	Hexachlorobutadiene		5	4.75	ug/L	95	(70-130)		
LCS2	Hexachlorobutadiene		5	4.66	ug/L	93	(70-130)	20	1.9
MBLK	Hexachlorobutadiene			<0.5	ug/L				
MRL_CHK	Hexachlorobutadiene		0.5	0.710	ug/L	142	(50-150)		
LCS1	Isopropylbenzene		5	4.14	ug/L	83	(70-130)		
LCS2	Isopropylbenzene		5	4.14	ug/L	83	(70-130)	20	0.0
MBLK	Isopropylbenzene			<0.5	ug/L				
MRL_CHK	Isopropylbenzene		0.5	0.630	ug/L	126	(50-150)		
LCS1	m,p-Xylenes		10	8.29	ug/L	83	(70-130)		
LCS2	m,p-Xylenes		10	8.33	ug/L	83	(70-130)	20	0.48
MBLK	m,p-Xylenes			<0.5	ug/L				
MRL_CHK	m,p-Xylenes		1	1.12	ug/L	112	(50-150)		
MRLLW	m,p-Xylenes		0.5	0.470	ug/L	94	(50-150)		
LCS1	m-Dichlorobenzene (1,3-DCB)		5	4.28	ug/L	86	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	4.40	ug/L	88	(70-130)	20	2.8
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
MRL_CHK	m-Dichlorobenzene (1,3-DCB)		0.5	0.710	ug/L	142	(50-150)		
LCS1	Methyl Tert-butyl ether (MTBE)		5	4.16	ug/L	83	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.23	ug/L	85	(70-130)	20	1.7
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
MRL_CHK	Methyl Tert-butyl ether (MTBE)		0.5	0.600	ug/L	120	(50-150)		
LCS1	Naphthalene		5	4.62	ug/L	92	(70-130)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Naphthalene		5	5.08	ug/L	102	(70-130)	20	9.5
MBLK	Naphthalene			<0.5	ug/L				
MRL_CHK	Naphthalene		0.5	1.05	ug/L	**210**	(50-150)		
LCS1	n-Butylbenzene		5	4.76	ug/L	95	(70-130)		
LCS2	n-Butylbenzene		5	4.77	ug/L	95	(70-130)	20	0.21
MBLK	n-Butylbenzene			<0.5	ug/L				
MRL_CHK	n-Butylbenzene		0.5	0.650	ug/L	130	(50-150)		
LCS1	n-Propylbenzene		5	3.91	ug/L	78	(70-130)		
LCS2	n-Propylbenzene		5	4.12	ug/L	82	(70-130)	20	5.2
MBLK	n-Propylbenzene			<0.5	ug/L				
MRL_CHK	n-Propylbenzene		0.5	0.620	ug/L	124	(50-150)		
LCS1	o-Chlorotoluene		5	4.19	ug/L	84	(70-130)		
LCS2	o-Chlorotoluene		5	4.40	ug/L	88	(70-130)	20	4.9
MBLK	o-Chlorotoluene			<0.5	ug/L				
MRL_CHK	o-Chlorotoluene		0.5	0.750	ug/L	150	(50-150)		
LCS1	o-Dichlorobenzene (1,2-DCB)		5	4.45	ug/L	89	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	4.51	ug/L	90	(70-130)	20	1.3
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
MRL_CHK	o-Dichlorobenzene (1,2-DCB)		0.5	0.700	ug/L	140	(50-150)		
LCS1	o-Xylene		5	4.04	ug/L	81	(70-130)		
LCS2	o-Xylene		5	4.06	ug/L	81	(70-130)	20	0.49
MBLK	o-Xylene			<0.5	ug/L				
MRL_CHK	o-Xylene		0.5	0.550	ug/L	110	(50-150)		
LCS1	p-Chlorotoluene		5	4.23	ug/L	85	(70-130)		
LCS2	p-Chlorotoluene		5	4.30	ug/L	86	(70-130)	20	1.6
MBLK	p-Chlorotoluene			<0.5	ug/L				
MRL_CHK	p-Chlorotoluene		0.5	0.790	ug/L	**158**	(50-150)		
LCS1	p-Dichlorobenzene (1,4-DCB)		5	4.23	ug/L	85	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	4.25	ug/L	85	(70-130)	20	0.47
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
MRL_CHK	p-Dichlorobenzene (1,4-DCB)		0.5	0.710	ug/L	142	(50-150)		
LCS1	p-Isopropyltoluene		5	4.19	ug/L	84	(70-130)		
LCS2	p-Isopropyltoluene		5	4.17	ug/L	83	(70-130)	20	0.48
MBLK	p-Isopropyltoluene			<0.5	ug/L				
MRL_CHK	p-Isopropyltoluene		0.5	0.580	ug/L	116	(50-150)		
LCS1	sec-Butylbenzene		5	4.41	ug/L	88	(70-130)		
LCS2	sec-Butylbenzene		5	4.51	ug/L	90	(70-130)	20	2.2
MBLK	sec-Butylbenzene			<0.5	ug/L				

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	sec-Butylbenzene		0.5	0.590	ug/L	118	(50-150)		
LCS1	Styrene		5	3.58	ug/L	72	(70-130)		
LCS2	Styrene		5	3.65	ug/L	73	(70-130)	20	1.9
MBLK	Styrene			<0.5	ug/L				
MRL_CHK	Styrene		0.5	0.460	ug/L	92	(50-150)		
LCS1	tert-amyl Methyl Ether		5	3.94	ug/L	79	(70-130)		
LCS2	tert-amyl Methyl Ether		5	4.05	ug/L	81	(70-130)	20	2.8
MBLK	tert-amyl Methyl Ether			<3	ug/L				
MRL_CHK	tert-amyl Methyl Ether		0.5	0.550	ug/L	110	(50-150)		
LCS1	tert-Butyl Ethyl Ether		5	4.29	ug/L	86	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	4.28	ug/L	86	(70-130)	20	0.23
MBLK	tert-Butyl Ethyl Ether			<3	ug/L				
MRL_CHK	tert-Butyl Ethyl Ether		0.5	0.580	ug/L	116	(50-150)		
LCS1	tert-Butylbenzene		5	4.32	ug/L	86	(70-130)		
LCS2	tert-Butylbenzene		5	4.45	ug/L	89	(70-130)	20	3.0
MBLK	tert-Butylbenzene			<0.5	ug/L				
MRL_CHK	tert-Butylbenzene		0.5	0.620	ug/L	124	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	3.92	ug/L	78	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.05	ug/L	81	(70-130)	20	3.3
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.560	ug/L	112	(50-150)		
LCS1	Toluene		5	4.13	ug/L	83	(70-130)		
LCS2	Toluene		5	4.18	ug/L	84	(70-130)	20	1.2
MBLK	Toluene			<0.5	ug/L				
MRL_CHK	Toluene		0.5	0.600	ug/L	120	(50-150)		
LCS1	Toluene-d8 (S)			99.2	%	99	(70-130)		
LCS2	Toluene-d8 (S)			100	%	100	(70-130)		
MBLK	Toluene-d8 (S)			95.0	%	95	(70-130)		
MRL_CHK	Toluene-d8 (S)			98.2	%	98	(70-130)		
MRLLW	Toluene-d8 (S)			97.4	%	97	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.19	ug/L	84	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	4.39	ug/L	88	(70-130)	20	4.7
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.630	ug/L	126	(50-150)		
LCS1	trans-1,3-Dichloropropene		5	4.31	ug/L	86	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	4.57	ug/L	91	(70-130)	20	5.9
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	trans-1,3-Dichloropropene		0.5	0.730	ug/L	146	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Trichloroethylene (TCE)		5	3.93	ug/L	79	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.15	ug/L	83	(70-130)	20	5.5
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.590	ug/L	118	(50-150)		
LCS1	Trichlorofluoromethane		5	4.00	ug/L	80	(70-130)		
LCS2	Trichlorofluoromethane		5	3.96	ug/L	79	(70-130)	20	1.0
MBLK	Trichlorofluoromethane			<0.5	ug/L				
MRL_CHK	Trichlorofluoromethane		0.5	0.500	ug/L	100	(50-150)		
LCS1	Trichlorotrifluoroethane(Freon		5	4.15	ug/L	83	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon		5	4.30	ug/L	86	(70-130)	20	3.5
MBLK	Trichlorotrifluoroethane(Freon			<0.5	ug/L				
MRL_CHK	Trichlorotrifluoroethane(Freon		0.5	0.510	ug/L	102	(50-150)		
LCS1	Vinyl chloride (VC)		5	4.31	ug/L	86	(70-130)		
LCS2	Vinyl chloride (VC)		5	4.35	ug/L	87	(70-130)	20	0.92
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.620	ug/L	124	(50-150)		
MRLLW	Vinyl chloride (VC)		0.25	0.340	ug/L	136	(50-150)		
QC Ref# 836682 - Volatile Organics by GCMS by EPA 524.2						**Analysis Date: 05/05/2015**			
LCS1	1,1,1,2-Tetrachloroethane		5	4.39	ug/L	88	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	4.69	ug/L	94	(70-130)	20	6.6
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,1,2-Tetrachloroethane		0.5	0.440	ug/L	88	(50-150)		
LCS1	1,1,1-Trichloroethane		5	3.93	ug/L	79	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.70	ug/L	94	(70-130)	20	18
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,1-Trichloroethane		0.5	0.410	ug/L	82	(50-150)		
LCS1	1,1,2,2-Tetrachloroethane		5	4.59	ug/L	92	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	5.66	ug/L	113	(70-130)	20	**21**
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,2,2-Tetrachloroethane		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,1,2-Trichloroethane		5	4.62	ug/L	92	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.53	ug/L	91	(70-130)	20	2.0
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.500	ug/L	100	(50-150)		
LCS1	1,1-Dichloroethane		5	4.32	ug/L	86	(70-130)		
LCS2	1,1-Dichloroethane		5	4.64	ug/L	93	(70-130)	20	7.1
MBLK	1,1-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethane		0.5	0.480	ug/L	96	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,1-Dichloroethylene		5	4.93	ug/L	99	(70-130)		
LCS2	1,1-Dichloroethylene		5	5.28	ug/L	106	(70-130)	20	6.9
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.520	ug/L	104	(50-150)		
LCS1	1,1-Dichloropropene		5	4.48	ug/L	90	(70-130)		
LCS2	1,1-Dichloropropene		5	4.94	ug/L	99	(70-130)	20	9.8
MBLK	1,1-Dichloropropene			<0.5	ug/L				
MRL_CHK	1,1-Dichloropropene		0.5	0.470	ug/L	94	(50-150)		
LCS1	1,2,3-Trichlorobenzene		5	4.40	ug/L	88	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	5.15	ug/L	103	(70-130)	20	16
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,3-Trichlorobenzene		0.5	0.580	ug/L	116	(50-150)		
LCS1	1,2,3-Trichloropropane		5	4.67	ug/L	93	(70-130)		
LCS2	1,2,3-Trichloropropane		5	5.55	ug/L	111	(70-130)	20	17
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.5	0.520	ug/L	104	(50-150)		
LCS1	1,2,4-Trichlorobenzene		5	4.55	ug/L	91	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	5.18	ug/L	104	(70-130)	20	13
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.550	ug/L	110	(50-150)		
LCS1	1,2,4-Trimethylbenzene		5	4.39	ug/L	88	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	5.48	ug/L	110	(70-130)	20	**22**
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trimethylbenzene		0.5	0.450	ug/L	90	(50-150)		
LCS1	1,2-Dichloroethane		5	4.32	ug/L	86	(70-130)		
LCS2	1,2-Dichloroethane		5	4.85	ug/L	97	(70-130)	20	12
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)			94.2	%	94	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			95.8	%	96	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			97.6	%	98	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			100	%	100	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)			100	%	100	(70-130)		
LCS1	1,2-Dichloropropane		5	4.49	ug/L	90	(70-130)		
LCS2	1,2-Dichloropropane		5	4.61	ug/L	92	(70-130)	20	2.6
MBLK	1,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,2-Dichloropropane		0.5	0.470	ug/L	94	(50-150)		
LCS1	1,3,5-Trimethylbenzene		5	4.29	ug/L	86	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	1,3,5-Trimethylbenzene		5	5.17	ug/L	103	(70-130)	20	19
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,3,5-Trimethylbenzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,3-Dichloropropane		5	4.65	ug/L	93	(70-130)		
LCS2	1,3-Dichloropropane		5	4.55	ug/L	91	(70-130)	20	2.2
MBLK	1,3-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,3-Dichloropropane		0.5	0.480	ug/L	96	(50-150)		
LCS1	2,2-Dichloropropane		5	3.95	ug/L	79	(70-130)		
LCS2	2,2-Dichloropropane		5	4.71	ug/L	94	(70-130)	20	18
MBLK	2,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	2,2-Dichloropropane		0.5	0.490	ug/L	98	(50-150)		
LCS1	2-Butanone (MEK)		50	48.1	ug/L	96	(70-130)		
LCS2	2-Butanone (MEK)		50	48.4	ug/L	97	(70-130)	20	0.83
MBLK	2-Butanone (MEK)			<5.0	ug/L				
MRL_CHK	2-Butanone (MEK)		5	5.36	ug/L	107	(50-150)		
LCS1	4-Bromofluorobenzene (S)			101	%	101	(70-130)		
LCS2	4-Bromofluorobenzene (S)			102	%	102	(70-130)		
MBLK	4-Bromofluorobenzene (S)			98.2	%	98	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			98.4	%	98	(70-130)		
MRLLW	4-Bromofluorobenzene (S)			102	%	102	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	52.8	ug/L	106	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	49.9	ug/L	100	(70-130)	20	5.7
MBLK	4-Methyl-2-Pentanone (MIBK)			<5	ug/L				
MRL_CHK	4-Methyl-2-Pentanone (MIBK)		5	5.03	ug/L	101	(50-150)		
LCS1	Benzene		5	4.39	ug/L	88	(70-130)		
LCS2	Benzene		5	4.80	ug/L	96	(70-130)	20	8.9
MBLK	Benzene			<0.5	ug/L				
MRL_CHK	Benzene		0.5	0.460	ug/L	92	(50-150)		
LCS1	Bromobenzene		5	4.38	ug/L	88	(70-130)		
LCS2	Bromobenzene		5	5.33	ug/L	107	(70-130)	20	20
MBLK	Bromobenzene			<0.5	ug/L				
MRL_CHK	Bromobenzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	Bromochloromethane		5	4.33	ug/L	87	(70-130)		
LCS2	Bromochloromethane		5	5.06	ug/L	101	(70-130)	20	16
MBLK	Bromochloromethane			<0.5	ug/L				
MRL_CHK	Bromochloromethane		0.5	0.430	ug/L	86	(50-150)		
LCS1	Bromodichloromethane		5	4.40	ug/L	88	(70-130)		
LCS2	Bromodichloromethane		5	4.65	ug/L	93	(70-130)	20	5.5

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Bromodichloromethane			<0.5	ug/L				
MRL_CHK	Bromodichloromethane		0.5	0.450	ug/L	90	(50-150)		
LCS1	Bromoethane		5	4.82	ug/L	96	(70-130)		
LCS2	Bromoethane		5	5.58	ug/L	112	(70-130)	20	15
MBLK	Bromoethane			<0.5	ug/L				
MRL_CHK	Bromoethane		0.5	0.390	ug/L	78	(50-150)		
LCS1	Bromoform		5	3.89	ug/L	78	(70-130)		
LCS2	Bromoform		5	4.30	ug/L	86	(70-130)	20	10
MBLK	Bromoform			<0.5	ug/L				
MRL_CHK	Bromoform		0.5	0.410	ug/L	82	(50-150)		
LCS1	Bromomethane (Methyl Bromide)		5	4.99	ug/L	100	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	5.38	ug/L	108	(70-130)	20	7.5
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
MRL_CHK	Bromomethane (Methyl Bromide)		0.5	0.470	ug/L	94	(50-150)		
LCS1	Carbon disulfide		5	4.46	ug/L	89	(70-130)		
LCS2	Carbon disulfide		5	4.70	ug/L	94	(70-130)	20	5.2
MBLK	Carbon disulfide			<0.5	ug/L				
MRL_CHK	Carbon disulfide		0.5	0.510	ug/L	102	(50-150)		
LCS1	Carbon Tetrachloride		5	4.13	ug/L	83	(70-130)		
LCS2	Carbon Tetrachloride		5	4.47	ug/L	89	(70-130)	20	7.9
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.440	ug/L	88	(50-150)		
LCS1	Chlorobenzene		5	4.73	ug/L	95	(70-130)		
LCS2	Chlorobenzene		5	4.64	ug/L	93	(70-130)	20	1.9
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.470	ug/L	94	(50-150)		
LCS1	Chlorodibromomethane		5	4.19	ug/L	84	(70-130)		
LCS2	Chlorodibromomethane		5	4.41	ug/L	88	(70-130)	20	5.1
MBLK	Chlorodibromomethane			<0.5	ug/L				
MRL_CHK	Chlorodibromomethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	Chloroethane		5	4.10	ug/L	82	(70-130)		
LCS2	Chloroethane		5	4.89	ug/L	98	(70-130)	20	18
MBLK	Chloroethane			<0.5	ug/L				
MRL_CHK	Chloroethane		0.5	0.570	ug/L	114	(50-150)		
LCS1	Chloroform (Trichloromethane)		5	4.54	ug/L	91	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.98	ug/L	100	(70-130)	20	9.2
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
MRL_CHK	Chloroform (Trichloromethane)		0.5	0.580	ug/L	116	(50-150)		

Spike recovery is already corrected for native results.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Chloromethane(Methyl Chloride)		5	4.69	ug/L	94	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	5.14	ug/L	103	(70-130)	20	9.2
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
MRL_CHK	Chloromethane(Methyl Chloride)		0.5	0.530	ug/L	106	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	4.47	ug/L	89	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	4.80	ug/L	96	(70-130)	20	7.1
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.460	ug/L	92	(50-150)		
LCS1	cis-1,3-Dichloropropene		5	4.26	ug/L	85	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	4.30	ug/L	86	(70-130)	20	0.94
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	cis-1,3-Dichloropropene		0.5	0.440	ug/L	88	(50-150)		
LCS1	Dibromomethane		5	4.59	ug/L	92	(70-130)		
LCS2	Dibromomethane		5	4.83	ug/L	97	(70-130)	20	5.1
MBLK	Dibromomethane			<0.5	ug/L				
MRL_CHK	Dibromomethane		0.5	0.500	ug/L	100	(50-150)		
LCS1	Dichlorodifluoromethane		5	5.08	ug/L	102	(70-130)		
LCS2	Dichlorodifluoromethane		5	5.44	ug/L	109	(70-130)	20	6.8
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
MRL_CHK	Dichlorodifluoromethane		0.5	0.540	ug/L	108	(50-150)		
LCS1	Dichloromethane		5	4.53	ug/L	91	(70-130)		
LCS2	Dichloromethane		5	4.86	ug/L	97	(70-130)	20	7.0
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	Di-isopropyl ether		5	4.46	ug/L	89	(70-130)		
LCS2	Di-isopropyl ether		5	4.70	ug/L	94	(70-130)	20	5.2
MBLK	Di-isopropyl ether			<3.0	ug/L				
MRL_CHK	Di-isopropyl ether		0.5	0.510	ug/L	102	(50-150)		
LCS1	Ethyl benzene		5	4.81	ug/L	96	(70-130)		
LCS2	Ethyl benzene		5	4.88	ug/L	98	(70-130)	20	1.4
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.470	ug/L	94	(50-150)		
LCS1	Hexachlorobutadiene		5	4.30	ug/L	86	(70-130)		
LCS2	Hexachlorobutadiene		5	5.25	ug/L	105	(70-130)	20	20
MBLK	Hexachlorobutadiene			<0.5	ug/L				
MRL_CHK	Hexachlorobutadiene		0.5	0.590	ug/L	118	(50-150)		
LCS1	Isopropylbenzene		5	4.32	ug/L	86	(70-130)		
LCS2	Isopropylbenzene		5	5.24	ug/L	105	(70-130)	20	19

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Isopropylbenzene			<0.5	ug/L				
MRL_CHK	Isopropylbenzene		0.5	0.470	ug/L	94	(50-150)		
LCS1	m,p-Xylenes		10	9.71	ug/L	97	(70-130)		
LCS2	m,p-Xylenes		10	9.66	ug/L	97	(70-130)	20	0.52
MBLK	m,p-Xylenes			<0.5	ug/L				
MRL_CHK	m,p-Xylenes		1	0.920	ug/L	92	(50-150)		
MRLLW	m,p-Xylenes		0.5	0.540	ug/L	108	(50-150)		
LCS1	m-Dichlorobenzene (1,3-DCB)		5	4.26	ug/L	85	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	5.34	ug/L	107	(70-130)	20	**23**
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
MRL_CHK	m-Dichlorobenzene (1,3-DCB)		0.5	0.490	ug/L	98	(50-150)		
LCS1	Methyl Tert-butyl ether (MTBE)		5	4.46	ug/L	89	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.77	ug/L	95	(70-130)	20	6.7
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
MRL_CHK	Methyl Tert-butyl ether (MTBE)		0.5	0.550	ug/L	110	(50-150)		
LCS1	Naphthalene		5	4.49	ug/L	90	(70-130)		
LCS2	Naphthalene		5	5.28	ug/L	106	(70-130)	20	16
MBLK	Naphthalene			<0.5	ug/L				
MRL_CHK	Naphthalene		0.5	0.550	ug/L	110	(50-150)		
LCS1	n-Butylbenzene		5	4.34	ug/L	87	(70-130)		
LCS2	n-Butylbenzene		5	5.15	ug/L	103	(70-130)	20	17
MBLK	n-Butylbenzene			<0.5	ug/L				
MRL_CHK	n-Butylbenzene		0.5	0.580	ug/L	116	(50-150)		
LCS1	n-Propylbenzene		5	4.14	ug/L	83	(70-130)		
LCS2	n-Propylbenzene		5	4.99	ug/L	100	(70-130)	20	19
MBLK	n-Propylbenzene			<0.5	ug/L				
MRL_CHK	n-Propylbenzene		0.5	0.530	ug/L	106	(50-150)		
LCS1	o-Chlorotoluene		5	4.45	ug/L	89	(70-130)		
LCS2	o-Chlorotoluene		5	5.38	ug/L	108	(70-130)	20	19
MBLK	o-Chlorotoluene			<0.5	ug/L				
MRL_CHK	o-Chlorotoluene		0.5	0.500	ug/L	100	(50-150)		
LCS1	o-Dichlorobenzene (1,2-DCB)		5	4.61	ug/L	92	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	5.23	ug/L	105	(70-130)	20	13
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
MRL_CHK	o-Dichlorobenzene (1,2-DCB)		0.5	0.540	ug/L	108	(50-150)		
LCS1	o-Xylene		5	4.66	ug/L	93	(70-130)		
LCS2	o-Xylene		5	4.85	ug/L	97	(70-130)	20	4.0
MBLK	o-Xylene			<0.5	ug/L				

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
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Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	o-Xylene		0.5	0.470	ug/L	94	(50-150)		
LCS1	p-Chlorotoluene		5	4.27	ug/L	85	(70-130)		
LCS2	p-Chlorotoluene		5	5.25	ug/L	105	(70-130)	20	**21**
MBLK	p-Chlorotoluene			<0.5	ug/L				
MRL_CHK	p-Chlorotoluene		0.5	0.460	ug/L	92	(50-150)		
LCS1	p-Dichlorobenzene (1,4-DCB)		5	4.37	ug/L	87	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	5.27	ug/L	105	(70-130)	20	19
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
MRL_CHK	p-Dichlorobenzene (1,4-DCB)		0.5	0.520	ug/L	104	(50-150)		
LCS1	p-Isopropyltoluene		5	4.29	ug/L	86	(70-130)		
LCS2	p-Isopropyltoluene		5	5.06	ug/L	101	(70-130)	20	17
MBLK	p-Isopropyltoluene			<0.5	ug/L				
MRL_CHK	p-Isopropyltoluene		0.5	0.500	ug/L	100	(50-150)		
LCS1	sec-Butylbenzene		5	4.36	ug/L	87	(70-130)		
LCS2	sec-Butylbenzene		5	5.35	ug/L	107	(70-130)	20	20
MBLK	sec-Butylbenzene			<0.5	ug/L				
MRL_CHK	sec-Butylbenzene		0.5	0.490	ug/L	98	(50-150)		
LCS1	Styrene		5	4.74	ug/L	95	(70-130)		
LCS2	Styrene		5	4.93	ug/L	99	(70-130)	20	3.9
MBLK	Styrene			<0.5	ug/L				
MRL_CHK	Styrene		0.5	0.470	ug/L	94	(50-150)		
LCS1	tert-amyl Methyl Ether		5	4.55	ug/L	91	(70-130)		
LCS2	tert-amyl Methyl Ether		5	4.86	ug/L	97	(70-130)	20	6.6
MBLK	tert-amyl Methyl Ether			<3	ug/L				
MRL_CHK	tert-amyl Methyl Ether		0.5	0.490	ug/L	98	(50-150)		
LCS1	tert-Butyl Ethyl Ether		5	4.45	ug/L	89	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	4.88	ug/L	98	(70-130)	20	9.2
MBLK	tert-Butyl Ethyl Ether			<3	ug/L				
MRL_CHK	tert-Butyl Ethyl Ether		0.5	0.510	ug/L	102	(50-150)		
LCS1	tert-Butylbenzene		5	4.35	ug/L	87	(70-130)		
LCS2	tert-Butylbenzene		5	5.39	ug/L	108	(70-130)	20	**21**
MBLK	tert-Butylbenzene			<0.5	ug/L				
MRL_CHK	tert-Butylbenzene		0.5	0.500	ug/L	100	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	4.45	ug/L	89	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.55	ug/L	91	(70-130)	20	2.2
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.470	ug/L	94	(50-150)		
LCS1	Toluene		5	4.52	ug/L	90	(70-130)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Toluene		5	4.58	ug/L	92	(70-130)	20	1.3
MBLK	Toluene			<0.5	ug/L				
MRL_CHK	Toluene		0.5	0.510	ug/L	102	(50-150)		
LCS1	Toluene-d8 (S)			104	%	104	(70-130)		
LCS2	Toluene-d8 (S)			93.4	%	93	(70-130)		
MBLK	Toluene-d8 (S)			101	%	101	(70-130)		
MRL_CHK	Toluene-d8 (S)			99.6	%	100	(70-130)		
MRLLW	Toluene-d8 (S)			101	%	101	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.39	ug/L	88	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	5.00	ug/L	100	(70-130)	20	13
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.520	ug/L	104	(50-150)		
LCS1	trans-1,3-Dichloropropene		5	4.24	ug/L	85	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	4.20	ug/L	84	(70-130)	20	0.95
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	trans-1,3-Dichloropropene		0.5	0.420	ug/L	84	(50-150)		
LCS1	Trichloroethylene (TCE)		5	4.62	ug/L	92	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.81	ug/L	96	(70-130)	20	4.0
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.450	ug/L	90	(50-150)		
LCS1	Trichlorofluoromethane		5	4.54	ug/L	91	(70-130)		
LCS2	Trichlorofluoromethane		5	4.84	ug/L	97	(70-130)	20	6.4
MBLK	Trichlorofluoromethane			<0.5	ug/L				
MRL_CHK	Trichlorofluoromethane		0.5	0.500	ug/L	100	(50-150)		
LCS1	Trichlorotrifluoroethane(Freon		5	4.81	ug/L	96	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon		5	5.07	ug/L	101	(70-130)	20	5.3
MBLK	Trichlorotrifluoroethane(Freon			<0.5	ug/L				
MRL_CHK	Trichlorotrifluoroethane(Freon		0.5	0.510	ug/L	102	(50-150)		
LCS1	Vinyl chloride (VC)		5	4.66	ug/L	93	(70-130)		
LCS2	Vinyl chloride (VC)		5	5.22	ug/L	104	(70-130)	20	11
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.490	ug/L	98	(50-150)		
MRLLW	Vinyl chloride (VC)		0.25	0.270	ug/L	108	(50-150)		
QC Ref# 836841 - 1,4-Dioxane by EPA 522						**Analysis Date: 05/05/2015**			
LCS1	Dioxane		20	18.3	ug/L	92	(70-130)		
MBLK	Dioxane			<1	ug/L				
MRLLW	Dioxane		0.07	0.0760	ug/L	109	(50-150)		
MS1_201504270074	Dioxane	1.3	0.07	1.35	ug/L	69	(50-150)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MSD1_201504270074	Dioxane	1.3	0.07	1.46	ug/L	**231**	(50-150)	20	7.8
LCS1	Dioxane-d8 (S)			92.8	%	93	(70-130)		
MBLK	Dioxane-d8 (S)			94.8	%	95	(70-130)		
MRLLW	Dioxane-d8 (S)			97.7	%	98	(70-130)		
MS1_201504270074	Dioxane-d8 (S)			89.8	%	90	(70-130)		
MSD1_201504270074	Dioxane-d8 (S)			93.8	%	94	(70-130)		
QC Ref# 837115 - Fluoride by SM 4500F-C						**Analysis Date: 05/07/2015**			
LCS1	Fluoride		1	1.01	mg/L	101	(81-116)		
LCS2	Fluoride		1	1.02	mg/L	102	(81-116)	20	0.99
MBLK	Fluoride			<0.05	mg/L				
MRL_CHK	Fluoride		0.05	0.0459	mg/L	92	(50-150)		
MS_201504230218	Fluoride	0.29	1	1.26	mg/L	97	(80-120)		
MS_201505010171	Fluoride	ND	1	0.997	mg/L	100	(80-120)		
MSD_201504230218	Fluoride	0.29	1	1.28	mg/L	99	(80-120)	20	1.6
MSD_201505010171	Fluoride	ND	1	1.03	mg/L	103	(80-120)	20	3.3
QC Ref# 837189 - Disinfection ByProducts by 300.0 by EPA 300.0						**Analysis Date: 05/07/2015**			
LCS1	Chlorate by IC		200	199	ug/L	100	(90-110)		
LCS2	Chlorate by IC		200	203	ug/L	101	(90-110)	20	2.0
MBLK	Chlorate by IC			<10	ug/L				
MRL_CHK	Chlorate by IC		10	10.1	ug/L	101	(75-125)		
MS_201504300031	Chlorate by IC	ND	100	98.7	ug/L	99	(80-120)		
MS_201505050590	Chlorate by IC	ND	100	101	ug/L	97	(80-120)		
MSD_201504300031	Chlorate by IC	ND	100	97.9	ug/L	98	(80-120)	15	0.81
MSD_201505050590	Chlorate by IC	ND	100	103	ug/L	98	(80-120)	15	2.0
QC Ref# 837703 - 1,2,3-Trichloropropane (SIM) by CASRL 524M-TCP						**Analysis Date: 05/08/2015**			
DUP_201505050154	1,2,3-Trichloropropane	0.407	0.05	0.366	ug/L		(0-20)	20	11
DUP_201505060477	1,2,3-Trichloropropane	0.378	0.05	0.380	ug/L		(0-20)	20	0.58
LCS1	1,2,3-Trichloropropane		0.01	0.0104	ug/L	104	(80-120)		
LCS2	1,2,3-Trichloropropane		0.01	0.00996	ug/L	100	(80-120)	20	4.3
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.005	0.00624	ug/L	125	(50-150)		
DUP_201505050154	Toluene-d8 (S)		1300	87.8	%	88	(70-130)		
DUP_201505060477	Toluene-d8 (S)		1300	96.4	%	96	(70-130)		
LCS1	Toluene-d8 (S)		130	95.2	%	95	(70-130)		
LCS2	Toluene-d8 (S)		130	88.8	%	89	(70-130)		
MBLK	Toluene-d8 (S)			93.6	%	94	(70-130)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Toluene-d8 (S)			93.4	%	93	(70-130)		
MRL_CHK	Toluene-d8 (S)		130	96.4	%	96	(70-130)		
QC Ref# 839102 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 05/17/2015**			
LCS1	NDMA-D6 (S)		20	93.5	%	94	(70-130)		
MBLK	NDMA-D6 (S)			116	%	116	(70-130)		
MRL_CHK	NDMA-D6 (S)		20	125	%	125	(70-130)		
MS1_201503030241	NDMA-D6 (S)		20	91.0	%	91	(70-130)		
MSD1_201503030241	NDMA-D6 (S)		20	110	%	110	(70-130)		
LCS1	N-Nitroso dimethylamine (NDMA)		40	35.1	ng/L	88	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2	2.16	ng/L	108	(50-150)		
MS1_201503030241	N-Nitroso dimethylamine (NDMA)	4.2	2	5.79	ng/L	80	(50-150)		
MSD1_201503030241	N-Nitroso dimethylamine (NDMA)	4.2	2	5.79	ng/L	81	(50-150)	30	0.0
LCS1	N-Nitrosodibutylamine (NDBA)		40	33.2	ng/L	83	(70-130)		
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/L				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2	2.13	ng/L	106	(50-150)		
MS1_201503030241	N-Nitrosodibutylamine (NDBA)	ND	2	1.83	ng/L	69	(50-150)		
MSD1_201503030241	N-Nitrosodibutylamine (NDBA)	ND	2	2.28	ng/L	91	(50-150)	30	22
LCS1	N-Nitrosodiethylamine (NDEA)		40	32.4	ng/L	81	(70-130)		
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/L				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2	2.26	ng/L	113	(50-150)		
MS1_201503030241	N-Nitrosodiethylamine (NDEA)	ND	2	1.87	ng/L	94	(50-150)		
MSD1_201503030241	N-Nitrosodiethylamine (NDEA)	ND	2	2.38	ng/L	119	(50-150)	30	24
LCS1	N-Nitrosodi-n-propylamin(NDPA)		40	31.1	ng/L	78	(70-130)		
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/L				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2	2.11	ng/L	106	(50-150)		
MS1_201503030241	N-Nitrosodi-n-propylamin(NDPA)	ND	2	2.11	ng/L	63	(50-150)		
MSD1_201503030241	N-Nitrosodi-n-propylamin(NDPA)	ND	2	2.56	ng/L	85	(50-150)	30	19
LCS1	N-Nitrosomethylethylamin(NMEA)		40	37.2	ng/L	93	(70-130)		
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/L				
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2	2.32	ng/L	116	(50-150)		
MS1_201503030241	N-Nitrosomethylethylamin(NMEA)	ND	2	1.99	ng/L	91	(50-150)		
MSD1_201503030241	N-Nitrosomethylethylamin(NMEA)	ND	2	2.49	ng/L	116	(50-150)	30	22
LCS1	N-Nitrosomorpholine		40	35.6	ng/l	89	(70-130)		
MBLK	N-Nitrosomorpholine			<2	ng/l				
MRL_CHK	N-Nitrosomorpholine		2	2.20	ng/l	110	(50-150)		
MS1_201503030241	N-Nitrosomorpholine		2	1.80	ng/l	90	(50-150)		
MSD1_201503030241	N-Nitrosomorpholine		2	2.06	ng/l	103	(50-150)	30	14

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory QC
Report: 532016

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	N-Nitrosopiperidine (NPIP)		40	31.3	ng/L	78	(70-130)		
MBLK	N-Nitrosopiperidine (NPIP)			<2	ng/L				
MRL_CHK	N-Nitrosopiperidine (NPIP)		2	2.16	ng/L	108	(50-150)		
MS1_201503030241	N-Nitrosopiperidine (NPIP)		2	2.02	ng/L	101	(50-150)		
MSD1_201503030241	N-Nitrosopiperidine (NPIP)		2	2.52	ng/l	126	(50-150)	30	22
LCS1	N-Nitrosopyrollidine (NPYR)		40	32.9	ng/L	82	(70-130)		
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/L				
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2	1.96	ng/L	98	(50-150)		
MS1_201503030241	N-Nitrosopyrollidine (NPYR)	ND	2	2.30	ng/L	80	(50-150)		
MSD1_201503030241	N-Nitrosopyrollidine (NPYR)	ND	2	2.70	ng/L	99	(50-150)	30	16

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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CLIENT: **EUROFINS EATON ANALYTICAL**

PROJECT: **532016**

SDG: **15D199**

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GC/MS-VOA	**	2000 –
GC/MS-SVOA	**	3000 –
GC-VOA	**	4000 –
GC-SVOA	**	5000 –
HPLC	METHOD 8330	6000 – 6007
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 05-11-2015
EMAX Batch No.: 15D199

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 532016

Enclosed is the Laboratory report for samples received on 04/29/15.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
201504290184	D199-01	04/28/15	WATER	NITROAROMATICS & NITRAMINES

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

eurofins | Eaton Analytical

Submittal Form & Purchase Order 99-34737

Date: 4/29/2015

*REPORTING REQUIRMENTS: *Do Not Combine Reports with any other samples submitted under different Folder Numbers!*
Report & Invoice must have the Folder # **532016** Sub PO# **99-34737** and Job # **1000014**

150199

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Ship To:
EMAX Laboratories, Inc.
1835 W. 205th St.

Torrance, CA 90501

Phone: 310-618-8889 Fax: 310-618-0818

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified State Certification # & Exp Date for requested tests + matrix.

Samples from: CALIFORNIA

Folder #:	Report Due:	Sub PO #:
532016	05/19/2015	99-34737

ILS	Client Sample ID for reference only	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
1	201504290184 MW-18-4		04/28/15 0730	DW		
EPA 8330	@8330EDD Emax	@8330EDD Emax				

Relinquished by: Sample Control Date _____ Time _____

Received by: _____ Date _____ Time _____

Relinquished by: Sample Control Date _____ Time _____

Received by: [signature] Date 4/29/15 Time 16:35

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

Temp = 1.7°C

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN 15D199
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Cecilia Chavez
☐ EMAX Courier ☑ Client Delivery		Date 04-29-15 Time 1635

COC INSPECTION

☑ Client Name	☑ Client PM/FC	☐ Sampler Name	☑ Sampling Date/Time	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☐ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
Safety Issues (if any)	☑ High concentrations expected	☐ From Superfund Site	☑ Rad screening required		

Note: COC was Sealed in cooler

PACKAGING INSPECTION

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☐ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 1.7 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C
Thermometer:	*A - S/N* _____	*B - S/N* 140252070	*C - S/N* 140252067	*D - S/N* _____	

FM 1/20/15

Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.**

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action

4/29/15

NB 4/30/15

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

☐ **Continue to next page.**

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in _____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in _____	D16	Preservation not indicated in _____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in _____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	_____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	_____
D10	No initial/date on corrections in COC/label	D22	_____	R10	_____
D11	Container count mismatch COC vs received	D23	_____	R11	_____
D12	Container size mismatch COC vs received	D24	_____	R12	_____

REVIEWS:

Sample Labeling [illegible] **Date** 04-29-15 / 4/29/15

SRF [illegible] **Date** 4/29/15

PM NB **Date** 4/30/15

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

532016

METHOD 8330
EXPLOSIVES

SDG#: 15D199

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 532016

SDG : 15D199

METHOD 8330
EXPLOSIVES

One (1) water sample was received on 04/29/15 to be analyzed for Explosives in accordance with Method 8330 and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. EXE001WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. EXE001WL/EXE001WC - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : EUROFINS EATON ANALYTICAL
Project : 532016

SDG NO. : 15D199
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXE001WB	1	NA	05/06/1514:25	05/04/1511:50	XE06004A	XE06002A	EXE001W	Method Blank
LCS1W	EXE001WL	1	NA	05/06/1514:59	05/04/1511:50	XE06005A	XE06002A	EXE001W	Lab Control Sample (LCS)
LCD1W	EXE001WC	1	NA	05/06/1515:33	05/04/1511:50	XE06006A	XE06002A	EXE001W	LCS Duplicate
201504290184	D199-01	1	NA	05/06/1516:07	05/04/1511:50	XE06007A	XE06002A	EXE001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/28/15
Project	: 532016	Date Received:	04/29/15
Batch No.	: 15D199	Date Extracted:	05/04/15 11:50
Sample ID:	201504290184	Date Analyzed:	05/06/15 16:07
Lab Samp ID:	D199-01	Dilution Factor:	1
Lab File ID:	XE06007A	Matrix	: WATER
Ext Btch ID:	EXE001W	% Moisture	: NA
Calib. Ref.:	XE06002A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.91	4.000	97.8	30-160

Note: All positive results are confirmed by Biphenyl column

QC SUMMARIES

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	NA
Project	: 532016	Date Received:	05/04/15
Batch No.	: 15D199	Date Extracted:	05/04/15 11:50
Sample ID:	MBLK1W	Date Analyzed:	05/06/15 14:25
Lab Samp ID:	EXE001WB	Dilution Factor:	1
Lab File ID:	XE06004A	Matrix :	WATER
Ext Btch ID:	EXE001W	% Moisture :	NA
Calib. Ref.:	XE06002A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.90	4.000	97.4	70-140

Note: All positive results are confirmed by Biphenyl column

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 532016
BATCH NO.: 15D199
METHOD: METHOD 8330

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	EXE001WB	EXE001WL	EXE001WC		
LAB FILE ID:	XE06004A	XE06005A	XE06006A		
DATE EXTRACTED:	05/04/1511:50	05/04/1511:50	05/04/1511:50	DATE COLLECTED:	NA
DATE ANALYZED:	05/06/1514:25	05/06/1514:59	05/06/1515:33	DATE RECEIVED:	05/04/15
PREP. BATCH:	EXE001W	EXE001W	EXE001W		
CALIB. REF:	XE06002A	XE06002A	XE06002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
HMX	ND	4.00	3.36	84	4.00	3.65	91	8	60-130	30
RDX	ND	4.00	3.21	80	4.00	3.33	83	4	60-130	30
1,3,5-TNB	ND	4.00	3.82	95	4.00	3.86	96	1	30-130	30
1,3-DNB	ND	4.00	3.54	88	4.00	3.60	90	2	60-130	30
Tetryl	ND	4.00	4.10	103	4.00	3.98	99	3	70-130	30
Nitrobenzene	ND	4.00	3.25	81	4.00	3.32	83	2	60-130	30
2,4,6-TNT	ND	4.00	3.79	95	4.00	3.94	99	4	70-130	30
4-AM-2,6-DNT	ND	4.00	3.44	86	4.00	3.67	92	7	70-130	30
2-AM-4,6-DNT	ND	4.00	3.72	93	4.00	3.85	96	3	70-130	30
2,6-DNT	ND	4.00	3.69	92	4.00	3.85	96	4	70-130	30
2,4-DNT	ND	4.00	3.86	96	4.00	4.03	101	4	70-130	30
2-Nitrotoluene	ND	4.00	3.34	83	4.00	3.42	86	2	70-130	30
3-Nitrotoluene	ND	4.00	3.28	82	4.00	3.62	91	10	70-130	30
4-Nitrotoluene	ND	4.00	3.37	84	4.00	3.71	93	10	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
3,4-Dinitrotoluene	4.00	3.99	100	4.00	4.12	103	70-140

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

ORELAP 4034

AT-1807

Laboratory Report

for

Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109
Attention: David Conner

Date of Issue
05/19/2015

EUROFINS EATON ANALYTICAL

DST: David S Tripp

Project Manager

Report: 532197
Project: TIDEWATER
Group: 2Q15 JPL Triannual
PO#: Sampling

* Accredited in accordance with TNI 2009 and ISO/IEC 17025:2005.
* Laboratory certifies that the test results meet all **TNI 2009 and ISO/IEC 17025:2005** requirements unless noted under the individual analysis.
* Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.
* Test results relate only to the sample(s) tested.

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STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	**Mississippi**	Certified
Alaska	CA00006	**Montana**	Cert 0035
Arizona	AZ0778	**Nebraska**	Certified
Arkansas	Certified	**Nevada**	CA00006-2014-1
California-Monrovia-ELAP	2813	**New Hampshire ***	2959
California-Colton- ELAP	2812	**New Jersey ***	CA 008
California-Folsom- ELAP	2820	**New Mexico**	Certified
Colorado	Certified	**New York ***	11320
Connecticut	PH-0107	**North Carolina**	06701
Delaware	CA 006	**North Dakota**	R-009
Florida *	E871024	**Oregon (Primary AB) ***	**ORELAP 4034**
Georgia	947	**Pennsylvania ***	68-565
Guam	14-003r	**Rhode Island**	LAO00326
Hawaii	Certified	**South Carolina**	87016
Idaho	Certified	**South Dakota**	Certified
Illinois *	200033	**Tennessee**	TN02839
Indiana	C-CA-01	**Texas ***	T104704230-14-7
Kansas *	E-10268	**Utah ***	CA000062014-7
Kentucky	90107	**Vermont**	VT0114
Louisiana *	LA140009	**Virginia ***	460260
Maine	CA0006	**Washington**	C838
Maryland	224	**West Virginia**	9943 C
Commonwealth of Northern Marianas Is.	MP0004	**Wisconsin**	998316660
Massachusetts	M-CA006	**Wyoming**	8TMS-L
Michigan	9906	**EPA Region 5**	Certified
Los Angeles County Sanitation Districts	10264		

* NELAP/TNI Recognized Accreditation Bodies

The tests listed below are accredited and meet the requirements of ISO 17025 as verified by the ANSI-ASQ National Accreditation Board/ACLASS.
Refer to Certificate and scope of accreditation (AT 1807) found at: http://www.eatonanalytical.com

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
1,4-Dioxane	EPA 522	x	x	
2,3,7,8-TCDD	Modified EPA 1613B	x	x	
Acrylamide	In House Method	x	x	
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H (18th)		x	x
Anions and DBPs by IC	EPA 300.0	x	x	x
Anions and DBPs by IC	EPA 300.1	x	x	
Asbestos	EPA 100.2	x		
Bicarbonate Alkalinity as HCO3	SM 2330B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method	x	x	
Carbamates	EPA 531.2	x	x	
Carbonate as CO3	SM 2330B	x	x	x
Carbonyls	EPA 556	x	x	
COD	EPA 410.4 / SM 5220D			x
Chloramines	SM 4500-CL G	x	x	x
Chlorinated Acids	EPA 515.4	x	x	
Chlorinated Acids	EPA 555	x	x	
Chlorine Dioxide	SM 4500-CLO2 D	x	x	
Chlorine -Total/Free/ Combined Residual	SM 4500-Cl G	x	x	x
Conductivity	EPA 120.1			x
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	x	x	
Cyanide, Amenable	SM 4500-CN G	x		x
Cyanide, Free	SM 4500CN F	x	x	x
Cyanide, Total	EPA 335.4	x	x	x
Cyanogen Chloride (screen)	In House Method	x	x	
Diquat and Paraquat	EPA 549.2	x	x	
DBP/HAA	SM 6251B	x	x	
Dissolved Oxygen	SM 4500-O G		x	x
E. Coli	(MTF/EC+MUG)	x		
E. Coli	CFR 141.21(f)(6)(i)		x	x
E. Coli	SM 9223			x
E. Coli (Enumeration)	SM 9221B.1/ SM 9221F	x	x	
E. Coli (Enumeration)	SM 9223B	x	x	
EDB/DCBP	EPA 504.1	x		
EDB/DBCP and DBP	EPA 551.1	x	x	
EDTA and NTA	In House Method	x	x	
Endothall	EPA 548.1	x	x	
Enterococci	SM 9230B	x		x
Fecal Coliform	SM 9221 E (MTF/EC)	x		
Fecal Coliform	SM 9221C, E (MTF/EC)			x
Fecal Coliform (Enumeration)	SM 9221E (MTF/EC)	x	x	
Fecal Coliform with Chlorine Present	SM 9221E			x
Fecal Streptococci	SM 9230B	x		x
Fluoride	SM 4500-F C	x	x	x
Glyphosate	EPA 547	x	x	
Gross Alpha/Beta	EPA 900.0	x	x	x
HAAs/ Dalapon	EPA 552.3	x	x	
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method	x	x	
Heterotrophic Bacteria	SM 9215 B	x	x	
Hexavalent Chromium	EPA 218.6	x	x	x
Hexavalent Chromium	EPA 218.7	x	x	
Hexavalent Chromium	SM 3500-Cr B or C (20th)			x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
Hormones	EPA 539	x	x	
Hydroxide as OH Calc.	SM 2330B	x	x	
Kjeldahl Nitrogen	EPA 351.2			x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA	x	x	
NDMA	EPA 521	x	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x	x
OCL, Pesticides/PCB	EPA 505	x	x	
Ortho Phosphate	EPA 365.1	x	x	
Ortho Phosphate and Total Phosphorous	EPA 365.1/SM 4500-P E			x
Ortho Phosphorous	SM 4500P E	x	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	x	
Perchlorate	EPA 331.0	x	x	
Perchlorate	EPA 314.0	x	x	
Perfluorinated Alkyl Acids	EPA 537	x	x	
pH	EPA 150.1	x		
pH	SM 4500-H+B	x	x	x
Phenylurea Pesticides/ Herbicides	In House Method	x	x	
Pseudomonas	IDEXX Pseudalert	x	x	
Radium-226	RA-226 GA	x	x	
Radium-228	RA-228 GA	x	x	
Radon-222	SM 7500RN	x	x	
Residue, Filterable	SM 2540C	x	x	x
Residue, Non-filterable	SM 2540D			x
Residue, Total	SM 2540B		x	x
Residue, Volatile	EPA 160.4			x
Semi-VOC	EPA 525.2	x	x	
Semi-VOC	EPA 625	x	x	x
Silica	SM 4500-Si D	x	x	x
Silica	SM 4500-SiO2 C	x		x
Sulfide	SM 4500-$S^{=}$ D			x
Sulfite	SM 4500-SO^{3}B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x	x	
Total Coliform	SM 9221 A, B	x	x	
Total Coliform (Enumeration)	SM 9221 A, B, C	x	x	
Total Coliform / E. coli	Colisure	x	x	
Total Coliform	SM 9221B			x
Total Coliform with Chlorine Present	SM 9221B			x
Total Coliform / E.coli	SM 9223	x	x	
TOC	SM 5310C		x	x
TOC/DOC	SM 5310C	x	x	
TOX	SM 5320B			x
Total Phenols	EPA 420.1			x
Total Phenols	EPA 420.4	x	x	x
Total Phosphorous	SM 4500 P F			x
Turbidity	EPA 180.1	x	x	x
Turbidity	SM 2130B	x		x
Uranium by ICP/MS	EPA 200.8	x	x	
UV 254	SM 5910B	x		
VOC	EPA 524.2/EPA 524.3	x	x	
VOC	EPA 624	x	x	x
VOC	EPA SW 846 8260	x	x	
VOC	In House Method	x	x	
Yeast and Mold	SM 9610	x	x	

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Acknowledgement of Samples Received

Addr: **Tidewater, Inc.**
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena91109
Attn: David Conner
Phone: 619-726-7311

Client ID: JPL-CA
Folder #: 532197
Project: TIDEWATER
Sample Group: 2Q15 JPL Triannual Sampling

Project Manager: David S Tripp
Phone: (626) 386-1158
PO #: 1213-000-05

The following samples were received from you on **April 29, 2015** at **1920**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
201504290805	MW-5	04/29/2015 1055

@ANIONS48	@8330EDD EMAX	@DIOXANE
@ML521_SPE8	@TCP-524	@VOASDWA
@VOA-TBA	Chlorate by IC	Fluoride
Hexavalent chromium(Dissolved)		

Test Description

@ANIONS48 -- Nitrate, Nitrite by EPA 300.0

@8330EDD EMAX -- @8330EDD Emax

@DIOXANE -- 1,4-Dioxane

@ML521_SPE8 -- Nitrosamines by GCMS

@TCP-524 -- 1,2,3-Trichloropropane (SIM)

@VOASDWA -- Volatile Organics by GCMS

@VOA-TBA -- TBA by EPA 524.2 Modified

750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (626) 386-1101 http://www.EatonAnalytical.com

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CHAIN OF CUSTODY RECORD

532197

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: _____

SAMPLES CHECKED AGAINST COC BY: PEF

SAMPLES LOGGED IN BY: W

SAMPLES REC'D DAY OF COLLECTION? [✓] (check for yes)

SAMPLE TEMP RECEIVED AT:
[ ] Colton / No. California / Arizona _____ °C (Compliance: 4 ± 2 °C)
[✓] Monrovia V6414 2.4.0.3 2.6 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen _____ Partially Frozen _____ Thawed _____ Wet Ice X No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: JPL-CA

PROJECT CODE: TIDEWATER bottle order

EEA CLIENT CODE:

COC ID:

SAMPLE GROUP: Blaine Tech

TAT requested: rush by adv notice only STD [X] 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES [ ] (check for yes)
- Requires state forms [ ]

NON-COMPLIANCE SAMPLES [ ] (check for yes)
REGULATION INVOLVED: _____

Type of samples (circle one): **ROUTINE SPECIAL CONFIRMATION** (eg. SDWA, Phase V, NPDES, FDA,...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES [X] (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	SAMPLER COMMENTS
4-29-15	1055	MW-5		RGW			

*** MATRIX TYPES:** **RSW** = Raw Surface Water, **RGW** = Raw Ground Water, **CFW** = Chlor(am)inated Finished Water, **FW** = Other Finished Water, **SEAW** = Sea Water, **WW** = Waste Water, **BW** = Bottled Water, **SW** = Storm Water, **SO** = Soil, **SL** = Sludge, **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	Andy Wolff	Andy Wolff	Blaine Tech/Area Supervisor	4-29-15	1055
RELINQUISHED BY:	Andy Wolff	" "	"	4-29-15	1700
RECEIVED BY:		A Malcolm		4-29-15	18:05
RELINQUISHED BY:		A Malcolm		4-29-15	1911
RECEIVED BY:	Ray Gibson	Ray Gibson	EEA	4-29-15	1920

QA FO 0029 (06/26/2013)

PAGE 1 OF 1

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Eaton Analytical
formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
(626) 386-1100 FAX (626) 386-1101

Kit Order for Jet Propulsion Laboratory

David S Tripp is your Eurofins Eaton Analytical Project Manager

Note: Sampler Please return this paper with your samples

Kit #: 110244
Created By: ADT
Deliver By: 04/10/2015
STG: Bottle Orders
Ice Type: W

Client ID: JPL-CA
Project Code: TIDEWATER Bottle Orders
Group Name: 2Q15 JPL Triannual Sampling
PO#/JOB#: 1213-000-05

Ship Sample Kits to
Jet Propulsion Laboratory
20735 Belshaw Avenue
Carson, CA 90746

Attn: Robert Sunjara
Phone: 310-885-4455 x 115

Send Report to
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

Billing Address
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

# of Sample	Tests	Bottles - Qty for each sample, type & preservative if a	UN DOT #
7	@8330EDD EMAX	2 1L amber glass 1ml thio (8%)	
7	@ANIONS48, Fluoride	1 125ml poly no preservative	
7	@DIOXANE	3 125ml amber glass 6.25 Sulfite +125 mg Bisulfite	
7	@ML521_SPE8	3 500ml amber glass 40-50 mg Na Thiosulfate	
7	@VOASDWA	2 ~~3~~ 40ml amber glass vial 4drops 6N HCL (36%)	UN1789
7	@VOA-TBA	4 40ml amber glass vial TBA_4 drops 1:1 HCL	UN1789
7	Chlorate by IC	1 60mL poly 0.6mL 1% EDA solution	
7	Hexavalent Chromium (Dissolved)	1 125ml poly 1.25 ml NH4SO4/NH4OH buffer	

Comments

One set per cooler

Code	Status	Date Shipped	Via	Tracking #	# of Coolers	Received By

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Hits
Report: 532197

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/29/2015 1920

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201504290805	**MW-5**				
05/07/2015 15:11	Chlorate by IC		160		ug/L	10
05/06/2015 17:10	Fluoride		0.24	4	mg/L	0.05
05/04/2015 21:37	Hexavalent chromium(Dissolved)		0.49		ug/L	0.02
04/30/2015 02:23	Nitrate as Nitrogen by IC		5.8	10	mg/L	0.2
04/30/2015 02:23	Nitrate as NO3 (calc)		26	45	mg/L	0.88
05/03/2015 4:48	Trichloroethylene (TCE)		1.1	5	ug/L	0.5

SUMMARY OF POSITIVE DATA ONLY

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1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 532197

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/29/2015 1920

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
MW-5 (201504290805)						**Sampled on 04/29/2015 1055**		
		EPA 522 - 1,4-Dioxane						
4/30/2015	05/05/2015 23:12	836841	(EPA 522)	1,4-Dioxane	ND	ug/L	1	1
4/30/2015	05/05/2015 23:12	836841	(EPA 522)	Dioxane-d8	91	%		1
		EPA 521 - Nitrosamines by GCMS						
5/1/2015	05/17/2015 22:23	839102	(EPA 521)	N-Nitrosodibutylamine (NDBA)	ND	ng/L	2	1
5/1/2015	05/17/2015 22:23	839102	(EPA 521)	N-Nitrosodiethylamine (NDEA)	ND	ng/L	2	1
5/1/2015	05/17/2015 22:23	839102	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
5/1/2015	05/17/2015 22:23	839102	(EPA 521)	N-Nitrosodi-n-propylamine (NDPA)	ND	ng/L	2	1
5/1/2015	05/17/2015 22:23	839102	(EPA 521)	N-Nitrosomethylethylamine (NMEA)	ND	ng/L	2	1
5/1/2015	05/17/2015 22:23	839102	(EPA 521)	N-Nitrosomorpholine	ND	ng/l	2	1
5/1/2015	05/17/2015 22:23	839102	(EPA 521)	N-Nitrosopiperidine (NPIP)	ND	ng/L	2	1
5/1/2015	05/17/2015 22:23	839102	(EPA 521)	N-Nitrosopyrollidine (NPYR)	ND	ng/L	2	1
5/1/2015	05/17/2015 22:23	839102	(EPA 521)	NDMA-D6	124	%		1
		EPA 218.6 - Hexavalent chromium(Dissolved)						
	05/04/2015 21:37	836437	(EPA 218.6)	Hexavalent chromium(Dissolved)	0.49	ug/L	0.02	1
		EPA 300.0 - Nitrate, Nitrite by EPA 300.0						
	04/30/2015 02:23	835627	(EPA 300.0)	Nitrate as Nitrogen by IC	5.8	mg/L	0.2	2
	04/30/2015 02:23	835627	(EPA 300.0)	Nitrate as NO3 (calc)	26	mg/L	0.88	2
		EPA 300.0 - Disinfection ByProducts by 300.0						
	05/07/2015 15:11	837189	(EPA 300.0)	Chlorate by IC	160	ug/L	10	1
		EPA 8330 - @8330EDD Emax						
	05/06/2015 16:42		(EPA 8330)	1,3,5-TNB	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	1,3-DNB	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	2,4,6-TNT	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	2,4-DNT	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	2,6-DNT	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	2-AM-4,6DNT	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	2-Nitrotoluene	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	3-Nitrotoluene	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	4-AM-2,6-DNT	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	4-Nitrotoluene	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	HMX	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	Nitrobenzene	ND	ug/L	0.4	1
	05/06/2015 16:42		(EPA 8330)	RDX	ND	ug/L	0.4	1

Rounding on totals after summation.
(c) - indicates calculated results

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750 Royal Oaks Drive, Suite 100
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1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 532197

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/29/2015 1920

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/06/2015	16:42		(EPA 8330)	Tetryl	ND	ug/L	0.4	1
	05/06/2015	16:42		(EPA 8330)	3,4-Dinitrotoluene	96	%		1
		EPA 524.2 - Volatile Organics by GCMS							
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.5	1
5/2/2015	05/05/2015	22:57	836706	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Benzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Bromobenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Bromoethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Bromoform	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Carbon disulfide	ND (LK)	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Chloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Chloroform (Trichloromethane)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 532197

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/29/2015 1920

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Dibromomethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Dichloromethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Naphthalene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	o-Xylene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Styrene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Toluene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Total THM	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Total xylenes	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Trichloroethylene (TCE)	1.1	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data
Report: 532197

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/29/2015 1920

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.3	1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	1,2-Dichloroethane-d4	106	%		1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	4-Bromofluorobenzene	97	%		1
5/2/2015	05/03/2015	4:48	836244	(EPA 524.2)	Toluene-d8	97	%		1
	CASRL 524M-TCP - 1,2,3-Trichloropropane (SIM)								
5/8/2015	05/08/2015	18:56	837703	(CASRL 524M-TCP)	1,2,3-Trichloropropane	ND	ug/L	0.005	1
5/8/2015	05/08/2015	18:56	837703	(CASRL 524M-TCP)	Toluene-d8	99	%		1
	EPA 524.2 SIM - TBA by EPA 524.2 Modified								
4/30/2015	04/30/2015	19:02	835946	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2	1
4/30/2015	04/30/2015	19:02	835946	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	108	%		1
4/30/2015	04/30/2015	19:02	835946	(EPA 524.2 SIM)	4-Bromofluorobenzene	92	%		1
4/30/2015	04/30/2015	19:02	835946	(EPA 524.2 SIM)	Toluene-d8	94	%		1
	SM 4500F-C - Fluoride								
	05/06/2015	17:10	836781	(SM 4500F-C)	Fluoride	0.24	mg/L	0.05	1

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Pasadena, 91109

Folder Comments

Analytical results for 8330 are submitted by Emax Laboratories, Inc. Torrance, CA

Flags Legend:

LK - The associated blank spike recovery was above method acceptance limits. This target analyte was not detected in the sample.

The Comments Report may be blank if there are no comments for this report.

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Tidewater, Inc.

QC Ref # 835627 - Nitrate, Nitrite by EPA 300.0 **Analysis Date: 04/30/2015**
201504290805 MW-5 Analyzed by: CYP

QC Ref # 835946 - TBA by EPA 524.2 Modified **Analysis Date: 04/30/2015**
201504290805 MW-5 Analyzed by: KCP

QC Ref # 836244 - Volatile Organics by GCMS **Analysis Date: 05/03/2015**
201504290805 MW-5 Analyzed by: KCP

QC Ref # 836437 - Hexavalent chromium(Dissolved) **Analysis Date: 05/04/2015**
201504290805 MW-5 Analyzed by: TLH

QC Ref # 836706 - Volatile Organics by GCMS **Analysis Date: 05/05/2015**
201504290805 MW-5 Analyzed by: KCP

QC Ref # 836781 - Fluoride **Analysis Date: 05/06/2015**
201504290805 MW-5 Analyzed by: MIA8

QC Ref # 836841 - 1,4-Dioxane **Analysis Date: 05/05/2015**
201504290805 MW-5 Analyzed by: JYH

QC Ref # 837189 - Disinfection ByProducts by 300.0 **Analysis Date: 05/07/2015**
201504290805 MW-5 Analyzed by: NJR

QC Ref # 837703 - 1,2,3-Trichloropropane (SIM) **Analysis Date: 05/08/2015**
201504290805 MW-5 Analyzed by: KAM

QC Ref # 839102 - Nitrosamines by GCMS **Analysis Date: 05/17/2015**
201504290805 MW-5 Analyzed by: KDT

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Laboratory QC
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 835627 - Nitrate, Nitrite by EPA 300.0 by EPA 300.0						**Analysis Date: 04/29/2015**			
LCS1	Nitrate as Nitrogen by IC		2.5	2.46	mg/L	98	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.45	mg/L	98	(90-110)	20	0.41
MBLK	Nitrate as Nitrogen by IC			<0.10	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0476	mg/L	95	(50-150)		
MS_201504160250	Nitrate as Nitrogen by IC	6.1	2.6	8.66	mg/L	103	(80-120)		
MS_201504290308	Nitrate as Nitrogen by IC	4.2	2.6	6.79	mg/L	103	(80-120)		
MSD_201504160250	Nitrate as Nitrogen by IC	6.1	2.6	8.62	mg/L	101	(80-120)	20	0.46
MSD_201504290308	Nitrate as Nitrogen by IC	4.2	2.6	6.77	mg/L	102	(80-120)	20	0.30
QC Ref# 835946 - TBA by EPA 524.2 Modified by EPA 524.2 SIM						**Analysis Date: 04/30/2015**			
LCS1	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			108	%	108	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
LCS1	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS2	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MBLK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS1	t-Butyl Alcohol		5	4.57	ug/L	91	(70-130)		
LCS2	t-Butyl Alcohol		5	4.50	ug/L	90	(70-130)	20	1.5
MBLK	t-Butyl Alcohol			<1	ug/L				
MRL_CHK	t-Butyl Alcohol		2	2.44	ug/L	122	(50-150)		
LCS1	Toluene-d8 (S)			96.0	%	96	(70-130)		
LCS2	Toluene-d8 (S)			96.0	%	96	(70-130)		
MBLK	Toluene-d8 (S)			98.0	%	98	(70-130)		
MRL_CHK	Toluene-d8 (S)			96.0	%	96	(70-130)		
QC Ref# 836244 - Volatile Organics by GCMS by EPA 524.2						**Analysis Date: 05/03/2015**			
LCS1	1,1,1,2-Tetrachloroethane		5	5.00	ug/L	100	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	5.30	ug/L	106	(70-130)	20	5.8
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
LCS1	1,1,1-Trichloroethane		5	4.33	ug/L	87	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.69	ug/L	94	(70-130)	20	8.0
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
LCS1	1,1,2,2-Tetrachloroethane		5	5.15	ug/L	103	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	5.00	ug/L	100	(70-130)	20	3.0
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
LCS1	1,1,2-Trichloroethane		5	5.02	ug/L	100	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532197

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	1,1,2-Trichloroethane		5	5.08	ug/L	102	(70-130)	20	1.2
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
LCS1	1,1-Dichloroethane		5	4.89	ug/L	98	(70-130)		
LCS2	1,1-Dichloroethane		5	5.08	ug/L	102	(70-130)	20	3.8
MBLK	1,1-Dichloroethane			<0.5	ug/L				
LCS1	1,1-Dichloroethylene		5	4.90	ug/L	98	(70-130)		
LCS2	1,1-Dichloroethylene		5	5.14	ug/L	103	(70-130)	20	4.8
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
LCS1	1,1-Dichloropropene		5	4.80	ug/L	96	(70-130)		
LCS2	1,1-Dichloropropene		5	5.14	ug/L	103	(70-130)	20	6.8
MBLK	1,1-Dichloropropene			<0.5	ug/L				
LCS1	1,2,3-Trichlorobenzene		5	5.58	ug/L	112	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	5.31	ug/L	106	(70-130)	20	5.0
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
LCS1	1,2,3-Trichloropropane		5	4.68	ug/L	94	(70-130)		
LCS2	1,2,3-Trichloropropane		5	4.73	ug/L	95	(70-130)	20	1.1
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
LCS1	1,2,4-Trichlorobenzene		5	5.07	ug/L	101	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	5.22	ug/L	104	(70-130)	20	2.9
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
LCS1	1,2,4-Trimethylbenzene		5	4.94	ug/L	99	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	5.13	ug/L	103	(70-130)	20	3.8
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
LCS1	1,2-Dichloroethane		5	5.06	ug/L	101	(70-130)		
LCS2	1,2-Dichloroethane		5	5.41	ug/L	108	(70-130)	20	6.7
MBLK	1,2-Dichloroethane			<0.5	ug/L				
LCS1	1,2-Dichloroethane-d4 (S)			109	%	109	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			105	%	105	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			107	%	107	(70-130)		
LCS1	1,2-Dichloropropane		5	4.97	ug/L	99	(70-130)		
LCS2	1,2-Dichloropropane		5	5.27	ug/L	105	(70-130)	20	5.9
MBLK	1,2-Dichloropropane			<0.5	ug/L				
LCS1	1,3,5-Trimethylbenzene		5	4.79	ug/L	96	(70-130)		
LCS2	1,3,5-Trimethylbenzene		5	4.90	ug/L	98	(70-130)	20	2.3
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
LCS1	1,3-Dichloropropane		5	4.98	ug/L	100	(70-130)		
LCS2	1,3-Dichloropropane		5	5.12	ug/L	102	(70-130)	20	2.8
MBLK	1,3-Dichloropropane			<0.5	ug/L				

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Report: 532197

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	2,2-Dichloropropane		5	3.37	ug/L	**67**	(70-130)		
LCS2	2,2-Dichloropropane		5	3.46	ug/L	**69**	(70-130)	20	2.6
MBLK	2,2-Dichloropropane			<0.5	ug/L				
LCS1	2-Butanone (MEK)		50	53.7	ug/L	107	(70-130)		
LCS2	2-Butanone (MEK)		50	55.3	ug/L	111	(70-130)	20	2.9
MBLK	2-Butanone (MEK)			<5.0	ug/L				
LCS1	4-Bromofluorobenzene (S)			95.2	%	95	(70-130)		
LCS2	4-Bromofluorobenzene (S)			97.2	%	97	(70-130)		
MBLK	4-Bromofluorobenzene (S)			102	%	102	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	58.6	ug/L	117	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	61.6	ug/L	123	(70-130)	20	5.0
MBLK	4-Methyl-2-Pentanone (MIBK)			<5	ug/L				
LCS1	Benzene		5	5.06	ug/L	101	(70-130)		
LCS2	Benzene		5	5.35	ug/L	107	(70-130)	20	5.6
MBLK	Benzene			<0.5	ug/L				
LCS1	Bromobenzene		5	4.66	ug/L	93	(70-130)		
LCS2	Bromobenzene		5	4.99	ug/L	100	(70-130)	20	6.8
MBLK	Bromobenzene			<0.5	ug/L				
LCS1	Bromochloromethane		5	4.46	ug/L	89	(70-130)		
LCS2	Bromochloromethane		5	4.64	ug/L	93	(70-130)	20	4.0
MBLK	Bromochloromethane			<0.5	ug/L				
LCS1	Bromodichloromethane		5	5.17	ug/L	103	(70-130)		
LCS2	Bromodichloromethane		5	5.51	ug/L	110	(70-130)	20	6.4
MBLK	Bromodichloromethane			<0.5	ug/L				
LCS1	Bromoethane		5	5.05	ug/L	101	(70-130)		
LCS2	Bromoethane		5	5.36	ug/L	107	(70-130)	20	6.0
MBLK	Bromoethane			<0.5	ug/L				
LCS1	Bromoform		5	5.52	ug/L	110	(70-130)		
LCS2	Bromoform		5	5.36	ug/L	107	(70-130)	20	2.9
MBLK	Bromoform			<0.5	ug/L				
LCS1	Bromomethane (Methyl Bromide)		5	5.29	ug/L	106	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	5.74	ug/L	115	(70-130)	20	8.2
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
LCS1	Carbon disulfide		5	6.36	ug/L	127	(70-130)		
LCS2	Carbon disulfide		5	6.59	ug/L	**132**	(70-130)	20	3.5
MBLK	Carbon disulfide			<0.5	ug/L				
LCS1	Carbon Tetrachloride		5	4.83	ug/L	97	(70-130)		
LCS2	Carbon Tetrachloride		5	4.88	ug/L	98	(70-130)	20	1.0

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Carbon Tetrachloride			<0.5	ug/L				
LCS1	Chlorobenzene		5	4.94	ug/L	99	(70-130)		
LCS2	Chlorobenzene		5	5.17	ug/L	103	(70-130)	20	4.5
MBLK	Chlorobenzene			<0.5	ug/L				
LCS1	Chlorodibromomethane		5	5.36	ug/L	107	(70-130)		
LCS2	Chlorodibromomethane		5	5.51	ug/L	110	(70-130)	20	2.8
MBLK	Chlorodibromomethane			<0.5	ug/L				
LCS1	Chloroethane		5	4.96	ug/L	99	(70-130)		
LCS2	Chloroethane		5	5.24	ug/L	105	(70-130)	20	5.5
MBLK	Chloroethane			<0.5	ug/L				
LCS1	Chloroform (Trichloromethane)		5	4.79	ug/L	96	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	5.05	ug/L	101	(70-130)	20	5.3
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
LCS1	Chloromethane(Methyl Chloride)		5	5.31	ug/L	106	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	5.40	ug/L	108	(70-130)	20	1.7
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
LCS1	cis-1,2-Dichloroethylene		5	4.85	ug/L	97	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	5.18	ug/L	104	(70-130)	20	6.6
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
LCS1	cis-1,3-Dichloropropene		5	4.73	ug/L	95	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	5.02	ug/L	100	(70-130)	20	6.0
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
LCS1	Dibromomethane		5	4.81	ug/L	96	(70-130)		
LCS2	Dibromomethane		5	4.93	ug/L	99	(70-130)	20	2.5
MBLK	Dibromomethane			<0.5	ug/L				
LCS1	Dichlorodifluoromethane		5	5.29	ug/L	106	(70-130)		
LCS2	Dichlorodifluoromethane		5	5.31	ug/L	106	(70-130)	20	0.38
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
LCS1	Dichloromethane		5	4.99	ug/L	100	(70-130)		
LCS2	Dichloromethane		5	5.36	ug/L	107	(70-130)	20	7.2
MBLK	Dichloromethane			<0.5	ug/L				
LCS1	Di-isopropyl ether		5	5.34	ug/L	107	(70-130)		
LCS2	Di-isopropyl ether		5	5.51	ug/L	110	(70-130)	20	3.1
MBLK	Di-isopropyl ether			<3.0	ug/L				
LCS1	Ethyl benzene		5	5.07	ug/L	101	(70-130)		
LCS2	Ethyl benzene		5	5.36	ug/L	107	(70-130)	20	5.6
MBLK	Ethyl benzene			<0.5	ug/L				
LCS1	Hexachlorobutadiene		5	5.13	ug/L	103	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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Laboratory QC
Report: 532197

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Hexachlorobutadiene		5	5.44	ug/L	109	(70-130)	20	5.9
MBLK	Hexachlorobutadiene			<0.5	ug/L				
LCS1	Isopropylbenzene		5	4.86	ug/L	97	(70-130)		
LCS2	Isopropylbenzene		5	4.98	ug/L	100	(70-130)	20	2.4
MBLK	Isopropylbenzene			<0.5	ug/L				
LCS1	m,p-Xylenes		10	10.1	ug/L	101	(70-130)		
LCS2	m,p-Xylenes		10	10.7	ug/L	107	(70-130)	20	5.8
MBLK	m,p-Xylenes			<0.5	ug/L				
LCS1	m-Dichlorobenzene (1,3-DCB)		5	4.84	ug/L	97	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	5.03	ug/L	101	(70-130)	20	3.9
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
LCS1	Methyl Tert-butyl ether (MTBE)		5	4.71	ug/L	94	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.88	ug/L	98	(70-130)	20	3.5
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
LCS1	Naphthalene		5	5.69	ug/L	114	(70-130)		
LCS2	Naphthalene		5	5.50	ug/L	110	(70-130)	20	3.4
MBLK	Naphthalene			<0.5	ug/L				
LCS1	n-Butylbenzene		5	5.24	ug/L	105	(70-130)		
LCS2	n-Butylbenzene		5	5.55	ug/L	111	(70-130)	20	5.8
MBLK	n-Butylbenzene			<0.5	ug/L				
LCS1	n-Propylbenzene		5	4.65	ug/L	93	(70-130)		
LCS2	n-Propylbenzene		5	4.99	ug/L	100	(70-130)	20	7.0
MBLK	n-Propylbenzene			<0.5	ug/L				
LCS1	o-Chlorotoluene		5	4.82	ug/L	96	(70-130)		
LCS2	o-Chlorotoluene		5	5.17	ug/L	103	(70-130)	20	7.0
MBLK	o-Chlorotoluene			<0.5	ug/L				
LCS1	o-Dichlorobenzene (1,2-DCB)		5	5.12	ug/L	102	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	5.06	ug/L	101	(70-130)	20	1.2
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
LCS1	o-Xylene		5	4.86	ug/L	97	(70-130)		
LCS2	o-Xylene		5	5.08	ug/L	102	(70-130)	20	4.4
MBLK	o-Xylene			<0.5	ug/L				
LCS1	p-Chlorotoluene		5	4.91	ug/L	98	(70-130)		
LCS2	p-Chlorotoluene		5	5.08	ug/L	102	(70-130)	20	3.4
MBLK	p-Chlorotoluene			<0.5	ug/L				
LCS1	p-Dichlorobenzene (1,4-DCB)		5	4.79	ug/L	96	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	4.99	ug/L	100	(70-130)	20	4.1
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				

Spike recovery is already corrected for native results.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532197

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	p-Isopropyltoluene		5	4.79	ug/L	96	(70-130)		
LCS2	p-Isopropyltoluene		5	4.95	ug/L	99	(70-130)	20	3.3
MBLK	p-Isopropyltoluene			<0.5	ug/L				
LCS1	sec-Butylbenzene		5	4.98	ug/L	100	(70-130)		
LCS2	sec-Butylbenzene		5	5.38	ug/L	108	(70-130)	20	7.7
MBLK	sec-Butylbenzene			<0.5	ug/L				
LCS1	Styrene		5	4.84	ug/L	97	(70-130)		
LCS2	Styrene		5	5.02	ug/L	100	(70-130)	20	3.6
MBLK	Styrene			<0.5	ug/L				
LCS1	tert-amyl Methyl Ether		5	4.54	ug/L	91	(70-130)		
LCS2	tert-amyl Methyl Ether		5	4.65	ug/L	93	(70-130)	20	2.4
MBLK	tert-amyl Methyl Ether			<3	ug/L				
LCS1	tert-Butyl Ethyl Ether		5	4.92	ug/L	98	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	5.03	ug/L	101	(70-130)	20	2.2
MBLK	tert-Butyl Ethyl Ether			<3	ug/L				
LCS1	tert-Butylbenzene		5	5.01	ug/L	100	(70-130)		
LCS2	tert-Butylbenzene		5	5.21	ug/L	104	(70-130)	20	3.9
MBLK	tert-Butylbenzene			<0.5	ug/L				
LCS1	Tetrachloroethylene (PCE)		5	4.42	ug/L	88	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.71	ug/L	94	(70-130)	20	6.3
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
LCS1	Toluene		5	4.82	ug/L	96	(70-130)		
LCS2	Toluene		5	5.14	ug/L	103	(70-130)	20	6.4
MBLK	Toluene			<0.5	ug/L				
LCS1	Toluene-d8 (S)			102	%	102	(70-130)		
LCS2	Toluene-d8 (S)			103	%	103	(70-130)		
MBLK	Toluene-d8 (S)			98.0	%	98	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.91	ug/L	98	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	5.33	ug/L	107	(70-130)	20	8.2
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
LCS1	trans-1,3-Dichloropropene		5	4.79	ug/L	96	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	5.08	ug/L	102	(70-130)	20	5.9
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
LCS1	Trichloroethylene (TCE)		5	4.65	ug/L	93	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.76	ug/L	95	(70-130)	20	2.3
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
LCS1	Trichlorofluoromethane		5	4.55	ug/L	91	(70-130)		
LCS2	Trichlorofluoromethane		5	4.92	ug/L	98	(70-130)	20	7.8

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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Trichlorofluoromethane			<0.5	ug/L				
LCS1	Trichlorotrifluoroethane(Freon		5	4.60	ug/L	92	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon		5	5.07	ug/L	101	(70-130)	20	9.7
MBLK	Trichlorotrifluoroethane(Freon			<0.5	ug/L				
LCS1	Vinyl chloride (VC)		5	5.11	ug/L	102	(70-130)		
LCS2	Vinyl chloride (VC)		5	5.32	ug/L	106	(70-130)	20	4.0
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
QC Ref# 836437 - Hexavalent chromium(Dissolved) by EPA 218.6						**Analysis Date: 05/04/2015**			
LCS1	Hexavalent chromium(Dissolved)		2	2.04	ug/L	102	(90-110)		
LCS2	Hexavalent chromium(Dissolved)		2	2.02	ug/L	101	(90-110)		
MBLK	Hexavalent chromium(Dissolved)			<0.020	ug/L				
MRL_CHK	Hexavalent chromium(Dissolved)		0.02	0.0172	ug/L	86	(50-150)		
MS_201504290805	Hexavalent chromium(Dissolved)	0.49	2	2.59	ug/L	105	(90-110)		
MS_201504300304	Hexavalent chromium(Dissolved)	0.47	2	2.60	ug/L	106	(90-110)		
MSD_201504290805	Hexavalent chromium(Dissolved)	0.49	2	2.65	ug/L	108	(90-110)	20	2.3
MSD_201504300304	Hexavalent chromium(Dissolved)	0.47	2	2.58	ug/L	105	(90-110)	20	0.77
QC Ref# 836706 - Volatile Organics by GCMS by EPA 524.2						**Analysis Date: 05/05/2015**			
LCS1	1,1,1,2-Tetrachloroethane		5	4.75	ug/L	95	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	4.98	ug/L	100	(70-130)	20	4.7
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,1,2-Tetrachloroethane		0.5	0.530	ug/L	106	(50-150)		
LCS1	1,1,1-Trichloroethane		5	4.17	ug/L	83	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.30	ug/L	86	(70-130)	20	3.1
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,1-Trichloroethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,1,2,2-Tetrachloroethane		5	4.61	ug/L	92	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	4.51	ug/L	90	(70-130)	20	2.2
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,2,2-Tetrachloroethane		0.5	0.520	ug/L	104	(50-150)		
LCS1	1,1,2-Trichloroethane		5	4.44	ug/L	89	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.62	ug/L	92	(70-130)	20	4.0
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	1,1-Dichloroethane		5	4.81	ug/L	96	(70-130)		
LCS2	1,1-Dichloroethane		5	4.81	ug/L	96	(70-130)	20	0.0
MBLK	1,1-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethane		0.5	0.560	ug/L	112	(50-150)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,1-Dichloroethylene		5	4.42	ug/L	88	(70-130)		
LCS2	1,1-Dichloroethylene		5	4.33	ug/L	87	(70-130)	20	2.1
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.590	ug/L	118	(50-150)		
LCS1	1,1-Dichloropropene		5	4.52	ug/L	90	(70-130)		
LCS2	1,1-Dichloropropene		5	4.56	ug/L	91	(70-130)	20	0.88
MBLK	1,1-Dichloropropene			<0.5	ug/L				
MRL_CHK	1,1-Dichloropropene		0.5	0.550	ug/L	110	(50-150)		
LCS1	1,2,3-Trichlorobenzene		5	4.76	ug/L	95	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	5.15	ug/L	103	(70-130)	20	7.9
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,3-Trichlorobenzene		0.5	1.11	ug/L	**222**	(50-150)		
LCS1	1,2,3-Trichloropropane		5	4.18	ug/L	84	(70-130)		
LCS2	1,2,3-Trichloropropane		5	4.47	ug/L	89	(70-130)	20	6.7
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.5	0.540	ug/L	108	(50-150)		
LCS1	1,2,4-Trichlorobenzene		5	4.87	ug/L	97	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	4.92	ug/L	98	(70-130)	20	1.0
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.650	ug/L	130	(50-150)		
LCS1	1,2,4-Trimethylbenzene		5	4.88	ug/L	98	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	4.72	ug/L	94	(70-130)	20	3.3
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trimethylbenzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,2-Dichloroethane		5	4.75	ug/L	95	(70-130)		
LCS2	1,2-Dichloroethane		5	5.04	ug/L	101	(70-130)	20	5.9
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.530	ug/L	106	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)			100	%	100	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			102	%	102	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			105	%	105	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			102	%	102	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)			107	%	107	(70-130)		
LCS1	1,2-Dichloropropane		5	4.72	ug/L	94	(70-130)		
LCS2	1,2-Dichloropropane		5	4.84	ug/L	97	(70-130)	20	2.5
MBLK	1,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,2-Dichloropropane		0.5	0.500	ug/L	100	(50-150)		
LCS1	1,3,5-Trimethylbenzene		5	4.64	ug/L	93	(70-130)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	1,3,5-Trimethylbenzene		5	4.51	ug/L	90	(70-130)	20	2.8
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,3,5-Trimethylbenzene		0.5	0.470	ug/L	94	(50-150)		
LCS1	1,3-Dichloropropane		5	4.61	ug/L	92	(70-130)		
LCS2	1,3-Dichloropropane		5	4.65	ug/L	93	(70-130)	20	0.86
MBLK	1,3-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,3-Dichloropropane		0.5	0.470	ug/L	94	(50-150)		
LCS1	2,2-Dichloropropane		5	3.74	ug/L	75	(70-130)		
LCS2	2,2-Dichloropropane		5	3.72	ug/L	74	(70-130)	20	0.54
MBLK	2,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	2,2-Dichloropropane		0.5	0.480	ug/L	96	(50-150)		
LCS1	2-Butanone (MEK)		50	51.8	ug/L	104	(70-130)		
LCS2	2-Butanone (MEK)		50	53.6	ug/L	107	(70-130)	20	3.4
MBLK	2-Butanone (MEK)			<5.0	ug/L				
MRL_CHK	2-Butanone (MEK)		5	6.50	ug/L	130	(50-150)		
LCS1	4-Bromofluorobenzene (S)			93.0	%	93	(70-130)		
LCS2	4-Bromofluorobenzene (S)			93.2	%	93	(70-130)		
MBLK	4-Bromofluorobenzene (S)			95.2	%	95	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			95.6	%	96	(70-130)		
MRLLW	4-Bromofluorobenzene (S)			98.2	%	98	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	57.5	ug/L	115	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	59.8	ug/L	120	(70-130)	20	4.1
MBLK	4-Methyl-2-Pentanone (MIBK)			<5	ug/L				
MRL_CHK	4-Methyl-2-Pentanone (MIBK)		5	5.52	ug/L	110	(50-150)		
LCS1	Benzene		5	4.77	ug/L	95	(70-130)		
LCS2	Benzene		5	4.84	ug/L	97	(70-130)	20	1.5
MBLK	Benzene			<0.5	ug/L				
MRL_CHK	Benzene		0.5	0.550	ug/L	110	(50-150)		
LCS1	Bromobenzene		5	4.52	ug/L	90	(70-130)		
LCS2	Bromobenzene		5	4.62	ug/L	92	(70-130)	20	2.2
MBLK	Bromobenzene			<0.5	ug/L				
MRL_CHK	Bromobenzene		0.5	0.510	ug/L	102	(50-150)		
LCS1	Bromochloromethane		5	4.45	ug/L	89	(70-130)		
LCS2	Bromochloromethane		5	4.39	ug/L	88	(70-130)	20	1.4
MBLK	Bromochloromethane			<0.5	ug/L				
MRL_CHK	Bromochloromethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	Bromodichloromethane		5	5.07	ug/L	101	(70-130)		
LCS2	Bromodichloromethane		5	5.14	ug/L	103	(70-130)	20	1.4

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532197

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Bromodichloromethane			<0.5	ug/L				
MRL_CHK	Bromodichloromethane		0.5	0.490	ug/L	98	(50-150)		
LCS1	Bromoethane		5	4.82	ug/L	96	(70-130)		
LCS2	Bromoethane		5	4.82	ug/L	96	(70-130)	20	0.0
MBLK	Bromoethane			<0.5	ug/L				
MRL_CHK	Bromoethane		0.5	0.570	ug/L	114	(50-150)		
LCS1	Bromoform		5	4.79	ug/L	96	(70-130)		
LCS2	Bromoform		5	4.91	ug/L	98	(70-130)	20	2.5
MBLK	Bromoform			<0.5	ug/L				
MRL_CHK	Bromoform		0.5	0.490	ug/L	98	(50-150)		
LCS1	Bromomethane (Methyl Bromide)		5	4.77	ug/L	95	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	4.74	ug/L	95	(70-130)	20	0.63
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
MRL_CHK	Bromomethane (Methyl Bromide)		0.5	0.540	ug/L	108	(50-150)		
LCS1	Carbon disulfide		5	6.32	ug/L	126	(70-130)		
LCS2	Carbon disulfide		5	6.48	ug/L	130	(70-130)	20	2.5
MBLK	Carbon disulfide			<0.5	ug/L				
MRL_CHK	Carbon disulfide		0.5	0.590	ug/L	118	(50-150)		
LCS1	Carbon Tetrachloride		5	4.44	ug/L	89	(70-130)		
LCS2	Carbon Tetrachloride		5	4.41	ug/L	88	(70-130)	20	0.68
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.460	ug/L	92	(50-150)		
LCS1	Chlorobenzene		5	4.65	ug/L	93	(70-130)		
LCS2	Chlorobenzene		5	4.70	ug/L	94	(70-130)	20	1.1
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.530	ug/L	106	(50-150)		
LCS1	Chlorodibromomethane		5	4.66	ug/L	93	(70-130)		
LCS2	Chlorodibromomethane		5	4.91	ug/L	98	(70-130)	20	5.2
MBLK	Chlorodibromomethane			<0.5	ug/L				
MRL_CHK	Chlorodibromomethane		0.5	0.530	ug/L	106	(50-150)		
LCS1	Chloroethane		5	4.53	ug/L	91	(70-130)		
LCS2	Chloroethane		5	4.57	ug/L	91	(70-130)	20	0.88
MBLK	Chloroethane			<0.5	ug/L				
MRL_CHK	Chloroethane		0.5	0.690	ug/L	138	(50-150)		
LCS1	Chloroform (Trichloromethane)		5	4.59	ug/L	92	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.67	ug/L	93	(70-130)	20	1.7
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
MRL_CHK	Chloroform (Trichloromethane)		0.5	0.600	ug/L	120	(50-150)		

Spike recovery is already corrected for native results.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532197

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Chloromethane(Methyl Chloride)		5	5.10	ug/L	102	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	4.95	ug/L	99	(70-130)	20	3.0
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
MRL_CHK	Chloromethane(Methyl Chloride)		0.5	0.690	ug/L	138	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	4.71	ug/L	94	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	4.83	ug/L	97	(70-130)	20	2.5
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.540	ug/L	108	(50-150)		
LCS1	cis-1,3-Dichloropropene		5	4.43	ug/L	89	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	4.58	ug/L	92	(70-130)	20	3.3
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	cis-1,3-Dichloropropene		0.5	0.520	ug/L	104	(50-150)		
LCS1	Dibromomethane		5	4.51	ug/L	90	(70-130)		
LCS2	Dibromomethane		5	4.56	ug/L	91	(70-130)	20	1.1
MBLK	Dibromomethane			<0.5	ug/L				
MRL_CHK	Dibromomethane		0.5	0.470	ug/L	94	(50-150)		
LCS1	Dichlorodifluoromethane		5	4.30	ug/L	86	(70-130)		
LCS2	Dichlorodifluoromethane		5	4.33	ug/L	87	(70-130)	20	0.70
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
MRL_CHK	Dichlorodifluoromethane		0.5	0.610	ug/L	122	(50-150)		
LCS1	Dichloromethane		5	4.78	ug/L	96	(70-130)		
LCS2	Dichloromethane		5	4.80	ug/L	96	(70-130)	20	0.42
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.600	ug/L	120	(50-150)		
LCS1	Di-isopropyl ether		5	5.20	ug/L	104	(70-130)		
LCS2	Di-isopropyl ether		5	5.32	ug/L	106	(70-130)	20	2.3
MBLK	Di-isopropyl ether			<3.0	ug/L				
MRL_CHK	Di-isopropyl ether		0.5	0.580	ug/L	116	(50-150)		
LCS1	Ethyl benzene		5	4.83	ug/L	97	(70-130)		
LCS2	Ethyl benzene		5	4.85	ug/L	97	(70-130)	20	0.41
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	Hexachlorobutadiene		5	5.17	ug/L	103	(70-130)		
LCS2	Hexachlorobutadiene		5	5.13	ug/L	103	(70-130)	20	0.78
MBLK	Hexachlorobutadiene			<0.5	ug/L				
MRL_CHK	Hexachlorobutadiene		0.5	0.660	ug/L	132	(50-150)		
LCS1	Isopropylbenzene		5	4.45	ug/L	89	(70-130)		
LCS2	Isopropylbenzene		5	4.44	ug/L	89	(70-130)	20	0.23

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
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Laboratory QC
Report: 532197

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Isopropylbenzene			<0.5	ug/L				
MRL_CHK	Isopropylbenzene		0.5	0.490	ug/L	98	(50-150)		
LCS1	m,p-Xylenes		10	9.77	ug/L	98	(70-130)		
LCS2	m,p-Xylenes		10	9.60	ug/L	96	(70-130)	20	1.8
MBLK	m,p-Xylenes			<0.5	ug/L				
MRL_CHK	m,p-Xylenes		1	0.960	ug/L	96	(50-150)		
MRLLW	m,p-Xylenes		0.5	0.440	ug/L	88	(50-150)		
LCS1	m-Dichlorobenzene (1,3-DCB)		5	4.64	ug/L	93	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	4.60	ug/L	92	(70-130)	20	0.87
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
MRL_CHK	m-Dichlorobenzene (1,3-DCB)		0.5	0.540	ug/L	108	(50-150)		
LCS1	Methyl Tert-butyl ether (MTBE)		5	4.58	ug/L	92	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.73	ug/L	95	(70-130)	20	3.2
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
MRL_CHK	Methyl Tert-butyl ether (MTBE)		0.5	0.550	ug/L	110	(50-150)		
LCS1	Naphthalene		5	4.78	ug/L	96	(70-130)		
LCS2	Naphthalene		5	5.28	ug/L	106	(70-130)	20	9.9
MBLK	Naphthalene			<0.5	ug/L				
MRL_CHK	Naphthalene		0.5	1.07	ug/L	**214**	(50-150)		
LCS1	n-Butylbenzene		5	5.14	ug/L	103	(70-130)		
LCS2	n-Butylbenzene		5	5.09	ug/L	102	(70-130)	20	0.98
MBLK	n-Butylbenzene			<0.5	ug/L				
MRL_CHK	n-Butylbenzene		0.5	0.560	ug/L	112	(50-150)		
LCS1	n-Propylbenzene		5	4.28	ug/L	86	(70-130)		
LCS2	n-Propylbenzene		5	4.46	ug/L	89	(70-130)	20	4.1
MBLK	n-Propylbenzene			<0.5	ug/L				
MRL_CHK	n-Propylbenzene		0.5	0.500	ug/L	100	(50-150)		
LCS1	o-Chlorotoluene		5	4.52	ug/L	90	(70-130)		
LCS2	o-Chlorotoluene		5	4.63	ug/L	93	(70-130)	20	2.4
MBLK	o-Chlorotoluene			<0.5	ug/L				
MRL_CHK	o-Chlorotoluene		0.5	0.570	ug/L	114	(50-150)		
LCS1	o-Dichlorobenzene (1,2-DCB)		5	4.57	ug/L	91	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	4.70	ug/L	94	(70-130)	20	2.8
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
MRL_CHK	o-Dichlorobenzene (1,2-DCB)		0.5	0.570	ug/L	114	(50-150)		
LCS1	o-Xylene		5	4.66	ug/L	93	(70-130)		
LCS2	o-Xylene		5	4.68	ug/L	94	(70-130)	20	0.43
MBLK	o-Xylene			<0.5	ug/L				

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	o-Xylene		0.5	0.450	ug/L	90	(50-150)		
LCS1	p-Chlorotoluene		5	4.45	ug/L	89	(70-130)		
LCS2	p-Chlorotoluene		5	4.61	ug/L	92	(70-130)	20	3.5
MBLK	p-Chlorotoluene			<0.5	ug/L				
MRL_CHK	p-Chlorotoluene		0.5	0.550	ug/L	110	(50-150)		
LCS1	p-Dichlorobenzene (1,4-DCB)		5	4.54	ug/L	91	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	4.60	ug/L	92	(70-130)	20	1.3
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
MRL_CHK	p-Dichlorobenzene (1,4-DCB)		0.5	0.560	ug/L	112	(50-150)		
LCS1	p-Isopropyltoluene		5	4.57	ug/L	91	(70-130)		
LCS2	p-Isopropyltoluene		5	4.63	ug/L	93	(70-130)	20	1.3
MBLK	p-Isopropyltoluene			<0.5	ug/L				
MRL_CHK	p-Isopropyltoluene		0.5	0.500	ug/L	100	(50-150)		
LCS1	sec-Butylbenzene		5	4.72	ug/L	94	(70-130)		
LCS2	sec-Butylbenzene		5	4.74	ug/L	95	(70-130)	20	0.42
MBLK	sec-Butylbenzene			<0.5	ug/L				
MRL_CHK	sec-Butylbenzene		0.5	0.520	ug/L	104	(50-150)		
LCS1	Styrene		5	4.65	ug/L	93	(70-130)		
LCS2	Styrene		5	4.56	ug/L	91	(70-130)	20	2.0
MBLK	Styrene			<0.5	ug/L				
MRL_CHK	Styrene		0.5	0.390	ug/L	78	(50-150)		
LCS1	tert-amyl Methyl Ether		5	4.39	ug/L	88	(70-130)		
LCS2	tert-amyl Methyl Ether		5	4.48	ug/L	90	(70-130)	20	2.0
MBLK	tert-amyl Methyl Ether			<3	ug/L				
MRL_CHK	tert-amyl Methyl Ether		0.5	0.460	ug/L	92	(50-150)		
LCS1	tert-Butyl Ethyl Ether		5	4.70	ug/L	94	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	4.99	ug/L	100	(70-130)	20	6.0
MBLK	tert-Butyl Ethyl Ether			<3	ug/L				
MRL_CHK	tert-Butyl Ethyl Ether		0.5	0.560	ug/L	112	(50-150)		
LCS1	tert-Butylbenzene		5	4.47	ug/L	89	(70-130)		
LCS2	tert-Butylbenzene		5	4.56	ug/L	91	(70-130)	20	2.0
MBLK	tert-Butylbenzene			<0.5	ug/L				
MRL_CHK	tert-Butylbenzene		0.5	0.540	ug/L	108	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	4.29	ug/L	86	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.40	ug/L	88	(70-130)	20	2.5
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.520	ug/L	104	(50-150)		
LCS1	Toluene		5	4.60	ug/L	92	(70-130)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Toluene		5	4.64	ug/L	93	(70-130)	20	0.87
MBLK	Toluene			<0.5	ug/L				
MRL_CHK	Toluene		0.5	0.520	ug/L	104	(50-150)		
LCS1	Toluene-d8 (S)			99.4	%	99	(70-130)		
LCS2	Toluene-d8 (S)			99.8	%	100	(70-130)		
MBLK	Toluene-d8 (S)			97.2	%	97	(70-130)		
MRL_CHK	Toluene-d8 (S)			96.8	%	97	(70-130)		
MRLLW	Toluene-d8 (S)			97.4	%	97	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.86	ug/L	97	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	4.87	ug/L	97	(70-130)	20	0.21
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.560	ug/L	112	(50-150)		
LCS1	trans-1,3-Dichloropropene		5	4.31	ug/L	86	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	4.52	ug/L	90	(70-130)	20	4.8
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	trans-1,3-Dichloropropene		0.5	0.550	ug/L	110	(50-150)		
LCS1	Trichloroethylene (TCE)		5	4.38	ug/L	88	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.37	ug/L	87	(70-130)	20	0.23
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.510	ug/L	102	(50-150)		
LCS1	Trichlorofluoromethane		5	4.08	ug/L	82	(70-130)		
LCS2	Trichlorofluoromethane		5	3.93	ug/L	79	(70-130)	20	3.8
MBLK	Trichlorofluoromethane			<0.5	ug/L				
MRL_CHK	Trichlorofluoromethane		0.5	0.590	ug/L	118	(50-150)		
LCS1	Trichlorotrifluoroethane(Freon		5	4.20	ug/L	84	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon		5	4.07	ug/L	81	(70-130)	20	3.1
MBLK	Trichlorotrifluoroethane(Freon			<0.5	ug/L				
MRL_CHK	Trichlorotrifluoroethane(Freon		0.5	0.490	ug/L	98	(50-150)		
LCS1	Vinyl chloride (VC)		5	4.51	ug/L	90	(70-130)		
LCS2	Vinyl chloride (VC)		5	4.67	ug/L	93	(70-130)	20	3.5
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.580	ug/L	116	(50-150)		
MRLLW	Vinyl chloride (VC)		0.25	0.290	ug/L	116	(50-150)		
QC Ref# 836781 - Fluoride by SM 4500F-C						**Analysis Date: 05/06/2015**			
LCS1	Fluoride		1	0.993	mg/L	99	(81-116)		
LCS2	Fluoride		1	1.02	mg/L	102	(81-116)	20	2.7
MBLK	Fluoride			<0.05	mg/L				
MRL_CHK	Fluoride		0.05	0.0460	mg/L	92	(50-150)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_201504290484	Fluoride	0.55	1	1.17	mg/L	**62**	(80-120)		
MS_201505060043	Fluoride	0.70	1	1.68	mg/L	98	(80-120)		
MSD_201504290484	Fluoride	0.55	1	1.16	mg/L	**61**	(80-120)	20	0.86
MSD_201505060043	Fluoride	0.70	1	1.69	mg/L	99	(80-120)	20	0.59
QC Ref# 836841 - 1,4-Dioxane by EPA 522						**Analysis Date: 05/05/2015**			
LCS1	Dioxane		20	18.3	ug/L	92	(70-130)		
MBLK	Dioxane			<1	ug/L				
MRLLW	Dioxane		0.07	0.0760	ug/L	109	(50-150)		
MS1_201504270074	Dioxane	1.3	0.07	1.35	ug/L	69	(50-150)		
MSD1_201504270074	Dioxane	1.3	0.07	1.46	ug/L	**231**	(50-150)	20	7.8
LCS1	Dioxane-d8 (S)			92.8	%	93	(70-130)		
MBLK	Dioxane-d8 (S)			94.8	%	95	(70-130)		
MRLLW	Dioxane-d8 (S)			97.7	%	98	(70-130)		
MS1_201504270074	Dioxane-d8 (S)			89.8	%	90	(70-130)		
MSD1_201504270074	Dioxane-d8 (S)			93.8	%	94	(70-130)		
QC Ref# 837189 - Disinfection ByProducts by 300.0 by EPA 300.0						**Analysis Date: 05/07/2015**			
LCS1	Chlorate by IC		200	199	ug/L	100	(90-110)		
LCS2	Chlorate by IC		200	203	ug/L	101	(90-110)	20	2.0
MBLK	Chlorate by IC			<10	ug/L				
MRL_CHK	Chlorate by IC		10	10.1	ug/L	101	(75-125)		
MS_201504300031	Chlorate by IC	ND	100	98.7	ug/L	99	(80-120)		
MS_201505050590	Chlorate by IC	ND	100	101	ug/L	97	(80-120)		
MSD_201504300031	Chlorate by IC	ND	100	97.9	ug/L	98	(80-120)	15	0.81
MSD_201505050590	Chlorate by IC	ND	100	103	ug/L	98	(80-120)	15	2.0
QC Ref# 837703 - 1,2,3-Trichloropropane (SIM) by CASRL 524M-TCP						**Analysis Date: 05/08/2015**			
DUP_201505050154	1,2,3-Trichloropropane	0.407	0.05	0.366	ug/L		(0-20)	20	11
DUP_201505060477	1,2,3-Trichloropropane	0.378	0.05	0.380	ug/L		(0-20)	20	0.58
LCS1	1,2,3-Trichloropropane		0.01	0.0104	ug/L	104	(80-120)		
LCS2	1,2,3-Trichloropropane		0.01	0.00996	ug/L	100	(80-120)	20	4.3
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.005	0.00624	ug/L	125	(50-150)		
DUP_201505050154	Toluene-d8 (S)		1300	87.8	%	88	(70-130)		
DUP_201505060477	Toluene-d8 (S)		1300	96.4	%	96	(70-130)		
LCS1	Toluene-d8 (S)		130	95.2	%	95	(70-130)		
LCS2	Toluene-d8 (S)		130	88.8	%	89	(70-130)		
MBLK	Toluene-d8 (S)			93.6	%	94	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

eurofins | Eaton Analytical

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory QC
Report: 532197

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Toluene-d8 (S)			93.4	%	93	(70-130)		
MRL_CHK	Toluene-d8 (S)		130	96.4	%	96	(70-130)		
QC Ref# 839102 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 05/17/2015**			
LCS1	NDMA-D6 (S)		20	93.5	%	94	(70-130)		
MBLK	NDMA-D6 (S)			116	%	116	(70-130)		
MRL_CHK	NDMA-D6 (S)		20	125	%	125	(70-130)		
MS1_201503030241	NDMA-D6 (S)		20	91.0	%	91	(70-130)		
MSD1_201503030241	NDMA-D6 (S)		20	110	%	110	(70-130)		
LCS1	N-Nitroso dimethylamine (NDMA)		40	35.1	ng/L	88	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2	2.16	ng/L	108	(50-150)		
MS1_201503030241	N-Nitroso dimethylamine (NDMA)	4.2	2	5.79	ng/L	80	(50-150)		
MSD1_201503030241	N-Nitroso dimethylamine (NDMA)	4.2	2	5.79	ng/L	81	(50-150)	30	0.0
LCS1	N-Nitrosodibutylamine (NDBA)		40	33.2	ng/L	83	(70-130)		
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/L				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2	2.13	ng/L	106	(50-150)		
MS1_201503030241	N-Nitrosodibutylamine (NDBA)	ND	2	1.83	ng/L	69	(50-150)		
MSD1_201503030241	N-Nitrosodibutylamine (NDBA)	ND	2	2.28	ng/L	91	(50-150)	30	22
LCS1	N-Nitrosodiethylamine (NDEA)		40	32.4	ng/L	81	(70-130)		
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/L				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2	2.26	ng/L	113	(50-150)		
MS1_201503030241	N-Nitrosodiethylamine (NDEA)	ND	2	1.87	ng/L	94	(50-150)		
MSD1_201503030241	N-Nitrosodiethylamine (NDEA)	ND	2	2.38	ng/L	119	(50-150)	30	24
LCS1	N-Nitrosodi-n-propylamin(NDPA)		40	31.1	ng/L	78	(70-130)		
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/L				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2	2.11	ng/L	106	(50-150)		
MS1_201503030241	N-Nitrosodi-n-propylamin(NDPA)	ND	2	2.11	ng/L	63	(50-150)		
MSD1_201503030241	N-Nitrosodi-n-propylamin(NDPA)	ND	2	2.56	ng/L	85	(50-150)	30	19
LCS1	N-Nitrosomethylethylamin(NMEA)		40	37.2	ng/L	93	(70-130)		
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/L				
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2	2.32	ng/L	116	(50-150)		
MS1_201503030241	N-Nitrosomethylethylamin(NMEA)	ND	2	1.99	ng/L	91	(50-150)		
MSD1_201503030241	N-Nitrosomethylethylamin(NMEA)	ND	2	2.49	ng/L	116	(50-150)	30	22
LCS1	N-Nitrosomorpholine		40	35.6	ng/l	89	(70-130)		
MBLK	N-Nitrosomorpholine			<2	ng/l				
MRL_CHK	N-Nitrosomorpholine		2	2.20	ng/l	110	(50-150)		
MS1_201503030241	N-Nitrosomorpholine		2	1.80	ng/l	90	(50-150)		
MSD1_201503030241	N-Nitrosomorpholine		2	2.06	ng/l	103	(50-150)	30	14

Spike recovery is already corrected for native results.
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RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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1 800 566 LABS (1 800 566 5227)

Laboratory QC
Report: 532197

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	N-Nitrosopiperidine (NPIP)		40	31.3	ng/L	78	(70-130)		
MBLK	N-Nitrosopiperidine (NPIP)			<2	ng/L				
MRL_CHK	N-Nitrosopiperidine (NPIP)		2	2.16	ng/L	108	(50-150)		
MS1_201503030241	N-Nitrosopiperidine (NPIP)		2	2.02	ng/L	101	(50-150)		
MSD1_201503030241	N-Nitrosopiperidine (NPIP)		2	2.52	ng/l	126	(50-150)	30	22
LCS1	N-Nitrosopyrollidine (NPYR)		40	32.9	ng/L	82	(70-130)		
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/L				
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2	1.96	ng/L	98	(50-150)		
MS1_201503030241	N-Nitrosopyrollidine (NPYR)	ND	2	2.30	ng/L	80	(50-150)		
MSD1_201503030241	N-Nitrosopyrollidine (NPYR)	ND	2	2.70	ng/L	99	(50-150)	30	16

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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CLIENT: **EUROFINS EATON ANALYTICAL**

PROJECT: **532197**

SDG: **15D208**

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GC/MS-VOA	**	2000 –
GC/MS-SVOA	**	3000 –
GC-VOA	**	4000 –
GC-SVOA	**	5000 –
HPLC	METHOD 8330	6000 – 6007
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 05-12-2015
EMAX Batch No.: 15D208

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 532197

Enclosed is the Laboratory report for samples received on 04/30/15.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
201504290805	D208-01	04/29/15	WATER	NITROAROMATICS & NITRAMINES

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

eurofins | Eaton Analytical

Ship To:
EMAX Laboratories, Inc.
1835 W. 205th St.

Torrance, CA 90501

Phone: 310-618-8889 Fax: 310-618-0818

Folder #:	Report Due:	Sub PO #:
532197	05/15/2015	99-34770

Submittal Form & Purchase Order 99-34770

15D208

Date: 4/30/2015

REPORTING REQUIRMENTS:** ***Do Not Combine Reports with any other samples submitted under different Folder Numbers!
Report & Invoice must have the Folder # **532197** Sub PO# **99-34770** and Job # **1000014**

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified State Certification # & Exp. Date for requested tests + matrix.

Samples from: **CALIFORNIA**

JLS	Client Sample ID for reference only	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
	201504290805 MW-5		04/29/15 1055	DW		
EPA 8330	@8330EDD Emax	@8330EDD Emax				

Relinquished by: Sample Control Date _____ Time _____

Received by: _____ Date _____ Time _____

Relinquished by: Sample Control Date _____ Time _____

Received by: [signature] Date 04-30-15 Time 1445

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN 150208
Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Shenkama
EMAX Courier ☑ Client Delivery		Date 04-30-15 Time 1445

COC INSPECTION

Client Name	☑ Client PM/FC	☐ Sampler Name	☑ Sampling Date/Time	☑ Sample ID	☑ Matrix
Address	☐ Tel # / Fax #	☐ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
fety Issues (if any)	☑ High concentrations expected	☐ From Superfund Site	☑ Rad screening required		

ote:

PACKAGING INSPECTION

ontainer	☑ Cooler	☐ Box	☐ Other		
ondition	☐ Custody Seal	☐ Intact	☐ Damaged		
ckaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
mperatures	☑ Cooler 1 2.5 °C	☐ Cooler 2 _____ °C	☐ Cooler 3 _____ °C	☐ Cooler 4 _____ °C	☐ Cooler 5 _____ °C
ol, ≤6 °C but not frozen)	☐ Cooler 6 _____ °C	☐ Cooler 7 _____ °C	☐ Cooler 8 _____ °C	☐ Cooler 9 _____ °C	☐ Cooler 10 _____ °C
Thermometer:	*A - S/N* _____	*B - S/N* 140252070	*C - S/N* 140252067	*D - S/N* _____	

FM 1/20/15

omments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.**

lote:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action

4/30/15 NB

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time: 4/30/15

NOTES/OBSERVATIONS:

LEGEND:

☐ **Continue to next page.**

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in _____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in _____	D16	Preservation not indicated in _____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in _____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	_____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	_____
D10	No initial/date on corrections in COC/label	D22	_____	R10	_____
D11	Container count mismatch COC vs received	D23	_____	R11	_____
D12	Container size mismatch COC vs received	D24	_____	R12	_____

REVIEWS:

Sample Labeling [illegible] **Date** 04-30-15 / 4/30/15

SRF [illegible] **Date** 4/30/15

PM NB **Date** 4/30/15

EMAX **Laboratories, Inc. 1835 W. 205th St., Torrance, Ca 90501**

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	*Diluted out*

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

532197

METHOD 8330
EXPLOSIVES

SDG#: 15D208

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 532197

SDG : 15D208

METHOD 8330
EXPLOSIVES

One (1) water sample was received on 04/30/15 to be analyzed for Explosives in accordance with Method 8330 and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. EXE001WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. EXE001WL/EXE001WC - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : EUROFINS EATON ANALYTICAL
Project : 532197

SDG NO. : 15D208
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXE001WB	1	NA	05/06/1514:25	05/04/1511:50	XE06004A	XE06002A	EXE001W	Method Blank
LCS1W	EXE001WL	1	NA	05/06/1514:59	05/04/1511:50	XE06005A	XE06002A	EXE001W	Lab Control Sample (LCS)
LCD1W	EXE001WC	1	NA	05/06/1515:33	05/04/1511:50	XE06006A	XE06002A	EXE001W	LCS Duplicate
201504290805	D208-01	1	NA	05/06/1516:42	05/04/1511:50	XE06008A	XE06002A	EXE001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/29/15
Project	: 532197	Date Received:	04/30/15
Batch No.	: 15D208	Date Extracted:	05/04/15 11:50
Sample ID:	201504290805	Date Analyzed:	05/06/15 16:42
Lab Samp ID:	D208-01	Dilution Factor:	1
Lab File ID:	XE06008A	Matrix	: WATER
Ext Btch ID:	EXE001W	% Moisture	: NA
Calib. Ref.:	XE06002A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.84	4.000	96.0	30-160

Note: All positive results are confirmed by Biphenyl column

QC SUMMARIES

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	NA
Project	: 532197	Date Received:	05/04/15
Batch No.	: 15D208	Date Extracted:	05/04/15 11:50
Sample ID:	MBLK1W	Date Analyzed:	05/06/15 14:25
Lab Samp ID:	XE001WB	Dilution Factor:	1
Lab File ID:	XE06004A	Matrix :	WATER
Ext Btch ID:	XE001W	% Moisture :	NA
Calib. Ref.:	XE06002A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.90	4.000	97.4	70-140

Note: All positive results are confirmed by Biphenyl column

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 532197
BATCH NO.: 15D208
METHOD: METHOD 8330

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	EXE001WB	EXE001WL	EXE001WC		
LAB FILE ID:	XE06004A	XE06005A	XE06006A		
DATE EXTRACTED:	05/04/1511:50	05/04/1511:50	05/04/1511:50	DATE COLLECTED:	NA
DATE ANALYZED:	05/06/1514:25	05/06/1514:59	05/06/1515:33	DATE RECEIVED:	05/04/15
PREP. BATCH:	EXE001W	EXE001W	EXE001W		
CALIB. REF:	XE06002A	XE06002A	XE06002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
HMX	ND	4.00	3.36	84	4.00	3.65	91	8	60-130	30
RDX	ND	4.00	3.21	80	4.00	3.33	83	4	60-130	30
1,3,5-TNB	ND	4.00	3.82	95	4.00	3.86	96	1	30-130	30
1,3-DNB	ND	4.00	3.54	88	4.00	3.60	90	2	60-130	30
Tetryl	ND	4.00	4.10	103	4.00	3.98	99	3	70-130	30
Nitrobenzene	ND	4.00	3.25	81	4.00	3.32	83	2	60-130	30
2,4,6-TNT	ND	4.00	3.79	95	4.00	3.94	99	4	70-130	30
4-AM-2,6-DNT	ND	4.00	3.44	86	4.00	3.67	92	7	70-130	30
2-AM-4,6-DNT	ND	4.00	3.72	93	4.00	3.85	96	3	70-130	30
2,6-DNT	ND	4.00	3.69	92	4.00	3.85	96	4	70-130	30
2,4-DNT	ND	4.00	3.86	96	4.00	4.03	101	4	70-130	30
2-Nitrotoluene	ND	4.00	3.34	83	4.00	3.42	86	2	70-130	30
3-Nitrotoluene	ND	4.00	3.28	82	4.00	3.62	91	10	70-130	30
4-Nitrotoluene	ND	4.00	3.37	84	4.00	3.71	93	10	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
3,4-Dinitrotoluene	4.00	3.99	100	4.00	4.12	103	70-140

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

ORELAP 4034

AT-1807

Laboratory Report

for

Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109
Attention: David Conner

Date of Issue
05/19/2015

EUROFINS EATON ANALYTICAL

DST: David S Tripp

Project Manager

Report: 532198
Project: TIDEWATER
Group: 2Q15 JPL Triannual
PO#: Sampling

* Accredited in accordance with TNI 2009 and ISO/IEC 17025:2005.
* Laboratory certifies that the test results meet all **TNI 2009 and ISO/IEC 17025:2005** requirements unless noted under the individual analysis.
* Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.
* Test results relate only to the sample(s) tested.

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STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	**Mississippi**	Certified
Alaska	CA00006	**Montana**	Cert 0035
Arizona	AZ0778	**Nebraska**	Certified
Arkansas	Certified	**Nevada**	CA00006-2014-1
California-Monrovia-ELAP	2813	**New Hampshire ***	2959
California-Colton- ELAP	2812	**New Jersey ***	CA 008
California-Folsom- ELAP	2820	**New Mexico**	Certified
Colorado	Certified	**New York ***	11320
Connecticut	PH-0107	**North Carolina**	06701
Delaware	CA 006	**North Dakota**	R-009
Florida *	E871024	**Oregon (Primary AB) ***	**ORELAP 4034**
Georgia	947	**Pennsylvania ***	68-565
Guam	14-003r	**Rhode Island**	LAO00326
Hawaii	Certified	**South Carolina**	87016
Idaho	Certified	**South Dakota**	Certified
Illinois *	200033	**Tennessee**	TN02839
Indiana	C-CA-01	**Texas ***	T104704230-14-7
Kansas *	E-10268	**Utah ***	CA000062014-7
Kentucky	90107	**Vermont**	VT0114
Louisiana *	LA140009	**Virginia ***	460260
Maine	CA0006	**Washington**	C838
Maryland	224	**West Virginia**	9943 C
Commonwealth of Northern Marianas Is.	MP0004	**Wisconsin**	998316660
Massachusetts	M-CA006	**Wyoming**	8TMS-L
Michigan	9906	**EPA Region 5**	Certified
Los Angeles County Sanitation Districts	10264		

* NELAP/TNI Recognized Accreditation Bodies

The tests listed below are accredited and meet the requirements of ISO 17025 as verified by the ANSI-ASQ National Accreditation Board/ACLASS.
Refer to Certificate and scope of accreditation (AT 1807) found at: http://www.eatonanalytical.com

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
1,4-Dioxane	EPA 522	x	x	
2,3,7,8-TCDD	Modified EPA 1613B	x	x	
Acrylamide	In House Method	x	x	
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H (18th)		x	x
Anions and DBPs by IC	EPA 300.0	x	x	x
Anions and DBPs by IC	EPA 300.1	x	x	
Asbestos	EPA 100.2	x		
Bicarbonate Alkalinity as HCO3	SM 2330B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method	x	x	
Carbamates	EPA 531.2	x	x	
Carbonate as CO3	SM 2330B	x	x	x
Carbonyls	EPA 556	x	x	
COD	EPA 410.4 / SM 5220D			x
Chloramines	SM 4500-CL G	x	x	x
Chlorinated Acids	EPA 515.4	x	x	
Chlorinated Acids	EPA 555	x	x	
Chlorine Dioxide	SM 4500-CLO2 D	x	x	
Chlorine -Total/Free/ Combined Residual	SM 4500-Cl G	x	x	x
Conductivity	EPA 120.1			x
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	x	x	
Cyanide, Amenable	SM 4500-CN G	x		x
Cyanide, Free	SM 4500CN F	x	x	x
Cyanide, Total	EPA 335.4	x	x	x
Cyanogen Chloride (screen)	In House Method	x	x	
Diquat and Paraquat	EPA 549.2	x	x	
DBP/HAA	SM 6251B	x	x	
Dissolved Oxygen	SM 4500-O G		x	x
E. Coli	(MTF/EC+MUG)	x		
E. Coli	CFR 141.21(f)(6)(i)		x	x
E. Coli	SM 9223			x
E. Coli (Enumeration)	SM 9221B.1/ SM 9221F	x	x	
E. Coli (Enumeration)	SM 9223B	x	x	
EDB/DCBP	EPA 504.1	x		
EDB/DBCP and DBP	EPA 551.1	x	x	
EDTA and NTA	In House Method	x	x	
Endothall	EPA 548.1	x	x	
Enterococci	SM 9230B	x		x
Fecal Coliform	SM 9221 E (MTF/EC)	x		
Fecal Coliform	SM 9221C, E (MTF/EC)			x
Fecal Coliform (Enumeration)	SM 9221E (MTF/EC)	x	x	
Fecal Coliform with Chlorine Present	SM 9221E			x
Fecal Streptococci	SM 9230B	x		x
Fluoride	SM 4500-F C	x	x	x
Glyphosate	EPA 547	x	x	
Gross Alpha/Beta	EPA 900.0	x	x	x
HAAs/ Dalapon	EPA 552.3	x	x	
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method	x	x	
Heterotrophic Bacteria	SM 9215 B	x	x	
Hexavalent Chromium	EPA 218.6	x	x	x
Hexavalent Chromium	EPA 218.7	x	x	
Hexavalent Chromium	SM 3500-Cr B or C (20th)			x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
Hormones	EPA 539	x	x	
Hydroxide as OH Calc.	SM 2330B	x	x	
Kjeldahl Nitrogen	EPA 351.2			x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA	x	x	
NDMA	EPA 521	x	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x	x
OCL, Pesticides/PCB	EPA 505	x	x	
Ortho Phosphate	EPA 365.1	x	x	
Ortho Phosphate and Total Phosphorous	EPA 365.1/SM 4500-P E			x
Ortho Phosphorous	SM 4500P E	x	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	x	
Perchlorate	EPA 331.0	x	x	
Perchlorate	EPA 314.0	x	x	
Perfluorinated Alkyl Acids	EPA 537	x	x	
pH	EPA 150.1	x		
pH	SM 4500-H+B	x	x	x
Phenylurea Pesticides/ Herbicides	In House Method	x	x	
Pseudomonas	IDEXX Pseudalert	x	x	
Radium-226	RA-226 GA	x	x	
Radium-228	RA-228 GA	x	x	
Radon-222	SM 7500RN	x	x	
Residue, Filterable	SM 2540C	x	x	x
Residue, Non-filterable	SM 2540D			x
Residue, Total	SM 2540B		x	x
Residue, Volatile	EPA 160.4			x
Semi-VOC	EPA 525.2	x	x	
Semi-VOC	EPA 625	x	x	x
Silica	SM 4500-Si D	x	x	x
Silica	SM 4500-SiO2 C	x		x
Sulfide	SM 4500-$S^{=}$ D			x
Sulfite	SM 4500-SO^{3}B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x	x	
Total Coliform	SM 9221 A, B	x	x	
Total Coliform (Enumeration)	SM 9221 A, B, C	x	x	
Total Coliform / E. coli	Colisure	x	x	
Total Coliform	SM 9221B			x
Total Coliform with Chlorine Present	SM 9221B			x
Total Coliform / E.coli	SM 9223	x	x	
TOC	SM 5310C		x	x
TOC/DOC	SM 5310C	x	x	
TOX	SM 5320B			x
Total Phenols	EPA 420.1			x
Total Phenols	EPA 420.4	x	x	x
Total Phosphorous	SM 4500 P F			x
Turbidity	EPA 180.1	x	x	x
Turbidity	SM 2130B	x		x
Uranium by ICP/MS	EPA 200.8	x	x	
UV 254	SM 5910B	x		
VOC	EPA 524.2/EPA 524.3	x	x	
VOC	EPA 624	x	x	x
VOC	EPA SW 846 8260	x	x	
VOC	In House Method	x	x	
Yeast and Mold	SM 9610	x	x	

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Acknowledgement of Samples Received

Addr: **Tidewater, Inc.**
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena91109
Attn: David Conner
Phone: 619-726-7311

Client ID: JPL-CA
Folder #: 532198
Project: TIDEWATER
Sample Group: 2Q15 JPL Triannual Sampling

Project Manager: David S Tripp
Phone: (626) 386-1158
PO #: 1213-000-05

The following samples were received from you on **April 29, 2015** at **1920**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
201504290806	MW-10	04/29/2015 0905

@ANIONS48	@8330EDD EMAX	@DIOXANE
@ML521_SPE8	@TCP-524	@VOASDWA
@VOA-TBA	Chlorate by IC	Fluoride
Hexavalent chromium(Dissolved)		

Test Description

@ANIONS48 -- Nitrate, Nitrite by EPA 300.0

@8330EDD EMAX -- @8330EDD Emax

@DIOXANE -- 1,4-Dioxane

@ML521_SPE8 -- Nitrosamines by GCMS

@TCP-524 -- 1,2,3-Trichloropropane (SIM)

@VOASDWA -- Volatile Organics by GCMS

@VOA-TBA -- TBA by EPA 524.2 Modified

750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (626) 386-1101 http://www.EatonAnalytical.com

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CHAIN OF CUSTODY RECORD

5

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: 464A

SAMPLES CHECKED AGAINST COC BY: Pz

SAMPLES LOGGED IN BY: W

SAMPLES REC'D DAY OF COLLECTION? [X] (check for yes)

SAMPLE TEMP RECEIVED AT:

[ ] Colton / No. California / Arizona _____ °C (Compliance: 4 ± 2 °C)

[X] Monrovia 2.4-0.3 2.6 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen _____ Partially Frozen _____ Thawed _____ Wet Ice X No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: JPL-CA

PROJECT CODE: TIDEWATER bottle order

EEA CLIENT CODE:

COC ID:

SAMPLE GROUP: Blaine Tech

TAT requested: rush by adv notice only STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES [ ] (check for yes)
- Requires state forms [ ]

NON-COMPLIANCE SAMPLES [ ] (check for yes)
REGULATION INVOLVED: _____

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA,...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES [X] (check for yes), *OR*
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	SAMPLER COMMENTS
4-29-15	0905	MW-10		RGW			

*** MATRIX TYPES:** **RSW** = Raw Surface Water, **RGW** = Raw Ground Water, **CFW** = Chlor(am)inated Finished Water, **FW** = Other Finished Water, **SEAW** = Sea Water, **WW** = Waste Water, **BW** = Bottled Water, **SW** = Storm Water, **SO** = Soil, **SL** = Sludge, **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	Andy Wolff	Andy Wolff	Blaine Tech/Area Supervisor	4-29-15	0905
RELINQUISHED BY:	Andy Wolff	" "	" "	4-29-15	1700
RECEIVED BY:	[signature]	Albert Mukgan	[signature]	4-29-15	1805
RELINQUISHED BY:	[signature]	A Mukgan	[signature]	4-29-15	1911
RECEIVED BY:	Perry Edwards	For G Rusk	[signature]	4-29-15	1920

QA FO 0029 (06/26/2013)

PAGE 1 OF 1

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formerly MWH Laboratories

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
(626) 386-1100 FAX (626) 386-1101

Kit Order for Jet Propulsion Laboratory

David S Tripp is your Eurofins Eaton Analytical Project Manager

Note: Sampler Please return this paper with your samples

Kit #: 110244
Created By: ADT
Deliver By: 04/10/2015
STG: Bottle Orders
Ice Type: W

Client ID: JPL-CA
Project Code: TIDEWATER Bottle Orders
Group Name: 2Q15 JPL Triannual Sampling
PO#/JOB#: 1213-000-05

Ship Sample Kits to
Jet Propulsion Laboratory
20735 Belshaw Avenue
Carson, CA 90746

Attn: Robert Sunjara
Phone: 310-885-4455 x 115

Send Report to
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

Billing Address
Tidewater, Inc.
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
Pasadena, 91109

Attn: David Conner
Phone: 619-726-7311
Fax: 614-458-6641

# of Sample	Tests	Bottles - Qty for each sample, type & preservative if a	UN DOT #
7	@8330EDD EMAX	2 1L amber glass 1ml thio (8%)	
7	@ANIONS48, Fluoride	1 125ml poly no preservative	
7	@DIOXANE	3 125ml amber glass 6.25 Sulfite +125 mg Bisulfite	
7	@ML521_SPE8	3 500ml amber glass 40-50 mg Na Thiosulfate	
7	@VOASDWA	3 40ml amber glass vial 4drops 6N HCL (36%)	UN1789
7	@VOA-TBA	4 40ml amber glass vial TBA_4 drops 1:1 HCL	UN1789
7	Chlorate by IC	1 60mL poly 0.6mL 1% EDA solution	
7	Hexavalent Chromium (Dissolved)	1 125ml poly 1.25 ml NH4SO4/NH4OH buffer	

Comments

One set per cooler

Code	Status	Date Shipped	Via	Tracking #	# of Coolers	Received B

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Hits
Report: 532198

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/29/2015 1920

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201504290806	**MW-10**				
05/07/2015 15:38	Chlorate by IC		490		ug/L	10
05/05/2015 17:02	Chloroform (Trichloromethane)		0.61		ug/L	0.5
05/06/2015 17:14	Fluoride		0.29	4	mg/L	0.05
05/04/2015 22:07	Hexavalent chromium(Dissolved)		1.6		ug/L	0.02
04/30/2015 02:36	Nitrate as Nitrogen by IC		14	10	mg/L	0.5
04/30/2015 02:36	Nitrate as NO3 (calc)		64	45	mg/L	2.2
05/17/2015 23:09	N-Nitrosomorpholine		2.1		ng/l	2
05/03/2015 5:10	Tetrachloroethylene (PCE)		0.52	5	ug/L	0.5
05/03/2015 5:10	Total THM		0.61	80	ug/L	0.5
05/03/2015 5:10	Trichloroethylene (TCE)		5.4	5	ug/L	0.5

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data
Report: 532198

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/29/2015 1920

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
MW-10 (201504290806)						**Sampled on 04/29/2015 0905**		
		EPA 522 - 1,4-Dioxane						
4/30/2015	05/05/2015 23:26	836841	(EPA 522)	1,4-Dioxane	ND	ug/L	1	1
4/30/2015	05/05/2015 23:26	836841	(EPA 522)	Dioxane-d8	83	%		1
		EPA 521 - Nitrosamines by GCMS						
5/1/2015	05/17/2015 23:09	839102	(EPA 521)	N-Nitrosodibutylamine (NDBA)	ND	ng/L	2	1
5/1/2015	05/17/2015 23:09	839102	(EPA 521)	N-Nitrosodiethylamine (NDEA)	ND	ng/L	2	1
5/1/2015	05/17/2015 23:09	839102	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
5/1/2015	05/17/2015 23:09	839102	(EPA 521)	N-Nitrosodi-n-propylamine (NDPA)	ND	ng/L	2	1
5/1/2015	05/17/2015 23:09	839102	(EPA 521)	N-Nitrosomethylethylamine (NMEA)	ND	ng/L	2	1
5/1/2015	05/17/2015 23:09	839102	(EPA 521)	N-Nitrosomorpholine	2.1	ng/l	2	1
5/1/2015	05/17/2015 23:09	839102	(EPA 521)	N-Nitrosopiperidine (NPIP)	ND	ng/L	2	1
5/1/2015	05/17/2015 23:09	839102	(EPA 521)	N-Nitrosopyrollidine (NPYR)	ND	ng/L	2	1
5/1/2015	05/17/2015 23:09	839102	(EPA 521)	NDMA-D6	105	%		1
		EPA 218.6 - Hexavalent chromium(Dissolved)						
	05/04/2015 22:07	836437	(EPA 218.6)	Hexavalent chromium(Dissolved)	1.6	ug/L	0.02	1
		EPA 300.0 - Nitrate, Nitrite by EPA 300.0						
	04/30/2015 02:36	835627	(EPA 300.0)	Nitrate as Nitrogen by IC	14	mg/L	0.5	5
	04/30/2015 02:36	835627	(EPA 300.0)	Nitrate as NO3 (calc)	64	mg/L	2.2	5
		EPA 300.0 - Disinfection ByProducts by 300.0						
	05/07/2015 15:38	837189	(EPA 300.0)	Chlorate by IC	490	ug/L	10	1
		EPA 8330 - @8330EDD Emax						
	05/06/2015 17:16		(EPA 8330)	1,3,5-TNB	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	1,3-DNB	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	2,4,6-TNT	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	2,4-DNT	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	2,6-DNT	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	2-AM-4,6DNT	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	2-Nitrotoluene	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	3-Nitrotoluene	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	4-AM-2,6-DNT	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	4-Nitrotoluene	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	HMX	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	Nitrobenzene	ND	ug/L	0.4	1
	05/06/2015 17:16		(EPA 8330)	RDX	ND	ug/L	0.4	1

Rounding on totals after summation.
(c) - indicates calculated results

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1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 532198

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/29/2015 1920

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/06/2015	17:16		(EPA 8330)	Tetryl	ND	ug/L	0.4	1
	05/06/2015	17:16		(EPA 8330)	3,4-Dinitrotoluene	96	%		1
		EPA 524.2 - Volatile Organics by GCMS							
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.5	1
5/2/2015	05/05/2015	17:02	836682	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Benzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Bromobenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Bromoethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Bromoform	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Carbon disulfide	ND (LK)	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Chloroethane	ND	ug/L	0.5	1
5/2/2015	05/05/2015	17:02	836682	(EPA 524.2)	Chloroform (Trichloromethane)	0.61	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data
Report: 532198

Tidewater, Inc.
David Conner
Environmental Restoration and Infrastructure
4800 Oak Grove Drive
M/S 180-801
Pasadena, 91109

Samples Received on:
04/29/2015 1920

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Dibromomethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Dichloromethane	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Naphthalene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	o-Xylene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Styrene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Tetrachloroethylene (PCE)	0.52	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Toluene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Total THM	0.61	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Total xylenes	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Trichloroethylene (TCE)	5.4	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.5	1

Rounding on totals after summation.
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Samples Received on:
04/29/2015 1920

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.5	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.3	1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	1,2-Dichloroethane-d4	104	%		1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	4-Bromofluorobenzene	99	%		1
5/2/2015	05/03/2015	5:10	836244	(EPA 524.2)	Toluene-d8	98	%		1
		CASRL 524M-TCP - 1,2,3-Trichloropropane (SIM)							
5/8/2015	05/08/2015	19:18	837703	(CASRL 524M-TCP)	1,2,3-Trichloropropane	ND	ug/L	0.005	1
5/8/2015	05/08/2015	19:18	837703	(CASRL 524M-TCP)	Toluene-d8	96	%		1
		EPA 524.2 SIM - TBA by EPA 524.2 Modified							
4/30/2015	04/30/2015	18:17	835946	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2	1
4/30/2015	04/30/2015	18:17	835946	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	106	%		1
4/30/2015	04/30/2015	18:17	835946	(EPA 524.2 SIM)	4-Bromofluorobenzene	90	%		1
4/30/2015	04/30/2015	18:17	835946	(EPA 524.2 SIM)	Toluene-d8	96	%		1
		SM 4500F-C - Fluoride							
	05/06/2015	17:14	836781	(SM 4500F-C)	Fluoride	0.29	mg/L	0.05	1

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Laboratory Comments
Report: 532198

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David Conner
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Pasadena, 91109

Folder Comments

Analytical results for 8330 are submitted by Emax Laboratories, Inc. Torrance, CA

Flags Legend:

LK - The associated blank spike recovery was above method acceptance limits. This target analyte was not detected in the sample.

The Comments Report may be blank if there are no comments for this report.

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QC Ref # 835627 - Nitrate, Nitrite by EPA 300.0 **Analysis Date: 04/30/2015**
201504290806 MW-10 Analyzed by: CYP

QC Ref # 835946 - TBA by EPA 524.2 Modified **Analysis Date: 04/30/2015**
201504290806 MW-10 Analyzed by: KCP

QC Ref # 836244 - Volatile Organics by GCMS **Analysis Date: 05/03/2015**
201504290806 MW-10 Analyzed by: KCP

QC Ref # 836437 - Hexavalent chromium(Dissolved) **Analysis Date: 05/04/2015**
201504290806 MW-10 Analyzed by: TLH

QC Ref # 836682 - Volatile Organics by GCMS **Analysis Date: 05/05/2015**
201504290806 MW-10 Analyzed by: KAM

QC Ref # 836781 - Fluoride **Analysis Date: 05/06/2015**
201504290806 MW-10 Analyzed by: MIA8

QC Ref # 836841 - 1,4-Dioxane **Analysis Date: 05/05/2015**
201504290806 MW-10 Analyzed by: JYH

QC Ref # 837189 - Disinfection ByProducts by 300.0 **Analysis Date: 05/07/2015**
201504290806 MW-10 Analyzed by: NJR

QC Ref # 837703 - 1,2,3-Trichloropropane (SIM) **Analysis Date: 05/08/2015**
201504290806 MW-10 Analyzed by: KAM

QC Ref # 839102 - Nitrosamines by GCMS **Analysis Date: 05/17/2015**
201504290806 MW-10 Analyzed by: KDT

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Laboratory QC
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 835627 - Nitrate, Nitrite by EPA 300.0 by EPA 300.0						**Analysis Date: 04/29/2015**			
LCS1	Nitrate as Nitrogen by IC		2.5	2.46	mg/L	98	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.45	mg/L	98	(90-110)	20	0.41
MBLK	Nitrate as Nitrogen by IC			<0.10	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0476	mg/L	95	(50-150)		
MS_201504160250	Nitrate as Nitrogen by IC	6.1	2.6	8.66	mg/L	103	(80-120)		
MS_201504290308	Nitrate as Nitrogen by IC	4.2	2.6	6.79	mg/L	103	(80-120)		
MSD_201504160250	Nitrate as Nitrogen by IC	6.1	2.6	8.62	mg/L	101	(80-120)	20	0.46
MSD_201504290308	Nitrate as Nitrogen by IC	4.2	2.6	6.77	mg/L	102	(80-120)	20	0.30
QC Ref# 835946 - TBA by EPA 524.2 Modified by EPA 524.2 SIM						**Analysis Date: 04/30/2015**			
LCS1	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			108	%	108	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
LCS1	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS2	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MBLK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			88.0	%	88	(70-130)		
LCS1	t-Butyl Alcohol		5	4.57	ug/L	91	(70-130)		
LCS2	t-Butyl Alcohol		5	4.50	ug/L	90	(70-130)	20	1.5
MBLK	t-Butyl Alcohol			<1	ug/L				
MRL_CHK	t-Butyl Alcohol		2	2.44	ug/L	122	(50-150)		
LCS1	Toluene-d8 (S)			96.0	%	96	(70-130)		
LCS2	Toluene-d8 (S)			96.0	%	96	(70-130)		
MBLK	Toluene-d8 (S)			98.0	%	98	(70-130)		
MRL_CHK	Toluene-d8 (S)			96.0	%	96	(70-130)		
QC Ref# 836244 - Volatile Organics by GCMS by EPA 524.2						**Analysis Date: 05/03/2015**			
LCS1	1,1,1,2-Tetrachloroethane		5	5.00	ug/L	100	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	5.30	ug/L	106	(70-130)	20	5.8
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
LCS1	1,1,1-Trichloroethane		5	4.33	ug/L	87	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.69	ug/L	94	(70-130)	20	8.0
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
LCS1	1,1,2,2-Tetrachloroethane		5	5.15	ug/L	103	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	5.00	ug/L	100	(70-130)	20	3.0
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
LCS1	1,1,2-Trichloroethane		5	5.02	ug/L	100	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	1,1,2-Trichloroethane		5	5.08	ug/L	102	(70-130)	20	1.2
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
LCS1	1,1-Dichloroethane		5	4.89	ug/L	98	(70-130)		
LCS2	1,1-Dichloroethane		5	5.08	ug/L	102	(70-130)	20	3.8
MBLK	1,1-Dichloroethane			<0.5	ug/L				
LCS1	1,1-Dichloroethylene		5	4.90	ug/L	98	(70-130)		
LCS2	1,1-Dichloroethylene		5	5.14	ug/L	103	(70-130)	20	4.8
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
LCS1	1,1-Dichloropropene		5	4.80	ug/L	96	(70-130)		
LCS2	1,1-Dichloropropene		5	5.14	ug/L	103	(70-130)	20	6.8
MBLK	1,1-Dichloropropene			<0.5	ug/L				
LCS1	1,2,3-Trichlorobenzene		5	5.58	ug/L	112	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	5.31	ug/L	106	(70-130)	20	5.0
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
LCS1	1,2,3-Trichloropropane		5	4.68	ug/L	94	(70-130)		
LCS2	1,2,3-Trichloropropane		5	4.73	ug/L	95	(70-130)	20	1.1
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
LCS1	1,2,4-Trichlorobenzene		5	5.07	ug/L	101	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	5.22	ug/L	104	(70-130)	20	2.9
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
LCS1	1,2,4-Trimethylbenzene		5	4.94	ug/L	99	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	5.13	ug/L	103	(70-130)	20	3.8
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
LCS1	1,2-Dichloroethane		5	5.06	ug/L	101	(70-130)		
LCS2	1,2-Dichloroethane		5	5.41	ug/L	108	(70-130)	20	6.7
MBLK	1,2-Dichloroethane			<0.5	ug/L				
LCS1	1,2-Dichloroethane-d4 (S)			109	%	109	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			105	%	105	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			107	%	107	(70-130)		
LCS1	1,2-Dichloropropane		5	4.97	ug/L	99	(70-130)		
LCS2	1,2-Dichloropropane		5	5.27	ug/L	105	(70-130)	20	5.9
MBLK	1,2-Dichloropropane			<0.5	ug/L				
LCS1	1,3,5-Trimethylbenzene		5	4.79	ug/L	96	(70-130)		
LCS2	1,3,5-Trimethylbenzene		5	4.90	ug/L	98	(70-130)	20	2.3
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
LCS1	1,3-Dichloropropane		5	4.98	ug/L	100	(70-130)		
LCS2	1,3-Dichloropropane		5	5.12	ug/L	102	(70-130)	20	2.8
MBLK	1,3-Dichloropropane			<0.5	ug/L				

Spike recovery is already corrected for native results.
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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	2,2-Dichloropropane		5	3.37	ug/L	**67**	(70-130)		
LCS2	2,2-Dichloropropane		5	3.46	ug/L	**69**	(70-130)	20	2.6
MBLK	2,2-Dichloropropane			<0.5	ug/L				
LCS1	2-Butanone (MEK)		50	53.7	ug/L	107	(70-130)		
LCS2	2-Butanone (MEK)		50	55.3	ug/L	111	(70-130)	20	2.9
MBLK	2-Butanone (MEK)			<5.0	ug/L				
LCS1	4-Bromofluorobenzene (S)			95.2	%	95	(70-130)		
LCS2	4-Bromofluorobenzene (S)			97.2	%	97	(70-130)		
MBLK	4-Bromofluorobenzene (S)			102	%	102	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	58.6	ug/L	117	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	61.6	ug/L	123	(70-130)	20	5.0
MBLK	4-Methyl-2-Pentanone (MIBK)			<5	ug/L				
LCS1	Benzene		5	5.06	ug/L	101	(70-130)		
LCS2	Benzene		5	5.35	ug/L	107	(70-130)	20	5.6
MBLK	Benzene			<0.5	ug/L				
LCS1	Bromobenzene		5	4.66	ug/L	93	(70-130)		
LCS2	Bromobenzene		5	4.99	ug/L	100	(70-130)	20	6.8
MBLK	Bromobenzene			<0.5	ug/L				
LCS1	Bromochloromethane		5	4.46	ug/L	89	(70-130)		
LCS2	Bromochloromethane		5	4.64	ug/L	93	(70-130)	20	4.0
MBLK	Bromochloromethane			<0.5	ug/L				
LCS1	Bromodichloromethane		5	5.17	ug/L	103	(70-130)		
LCS2	Bromodichloromethane		5	5.51	ug/L	110	(70-130)	20	6.4
MBLK	Bromodichloromethane			<0.5	ug/L				
LCS1	Bromoethane		5	5.05	ug/L	101	(70-130)		
LCS2	Bromoethane		5	5.36	ug/L	107	(70-130)	20	6.0
MBLK	Bromoethane			<0.5	ug/L				
LCS1	Bromoform		5	5.52	ug/L	110	(70-130)		
LCS2	Bromoform		5	5.36	ug/L	107	(70-130)	20	2.9
MBLK	Bromoform			<0.5	ug/L				
LCS1	Bromomethane (Methyl Bromide)		5	5.29	ug/L	106	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	5.74	ug/L	115	(70-130)	20	8.2
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
LCS1	Carbon disulfide		5	6.36	ug/L	127	(70-130)		
LCS2	Carbon disulfide		5	6.59	ug/L	**132**	(70-130)	20	3.5
MBLK	Carbon disulfide			<0.5	ug/L				
LCS1	Carbon Tetrachloride		5	4.83	ug/L	97	(70-130)		
LCS2	Carbon Tetrachloride		5	4.88	ug/L	98	(70-130)	20	1.0

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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Laboratory QC
Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Carbon Tetrachloride			<0.5	ug/L				
LCS1	Chlorobenzene		5	4.94	ug/L	99	(70-130)		
LCS2	Chlorobenzene		5	5.17	ug/L	103	(70-130)	20	4.5
MBLK	Chlorobenzene			<0.5	ug/L				
LCS1	Chlorodibromomethane		5	5.36	ug/L	107	(70-130)		
LCS2	Chlorodibromomethane		5	5.51	ug/L	110	(70-130)	20	2.8
MBLK	Chlorodibromomethane			<0.5	ug/L				
LCS1	Chloroethane		5	4.96	ug/L	99	(70-130)		
LCS2	Chloroethane		5	5.24	ug/L	105	(70-130)	20	5.5
MBLK	Chloroethane			<0.5	ug/L				
LCS1	Chloroform (Trichloromethane)		5	4.79	ug/L	96	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	5.05	ug/L	101	(70-130)	20	5.3
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
LCS1	Chloromethane(Methyl Chloride)		5	5.31	ug/L	106	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	5.40	ug/L	108	(70-130)	20	1.7
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
LCS1	cis-1,2-Dichloroethylene		5	4.85	ug/L	97	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	5.18	ug/L	104	(70-130)	20	6.6
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
LCS1	cis-1,3-Dichloropropene		5	4.73	ug/L	95	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	5.02	ug/L	100	(70-130)	20	6.0
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
LCS1	Dibromomethane		5	4.81	ug/L	96	(70-130)		
LCS2	Dibromomethane		5	4.93	ug/L	99	(70-130)	20	2.5
MBLK	Dibromomethane			<0.5	ug/L				
LCS1	Dichlorodifluoromethane		5	5.29	ug/L	106	(70-130)		
LCS2	Dichlorodifluoromethane		5	5.31	ug/L	106	(70-130)	20	0.38
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
LCS1	Dichloromethane		5	4.99	ug/L	100	(70-130)		
LCS2	Dichloromethane		5	5.36	ug/L	107	(70-130)	20	7.2
MBLK	Dichloromethane			<0.5	ug/L				
LCS1	Di-isopropyl ether		5	5.34	ug/L	107	(70-130)		
LCS2	Di-isopropyl ether		5	5.51	ug/L	110	(70-130)	20	3.1
MBLK	Di-isopropyl ether			<3.0	ug/L				
LCS1	Ethyl benzene		5	5.07	ug/L	101	(70-130)		
LCS2	Ethyl benzene		5	5.36	ug/L	107	(70-130)	20	5.6
MBLK	Ethyl benzene			<0.5	ug/L				
LCS1	Hexachlorobutadiene		5	5.13	ug/L	103	(70-130)		

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Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Hexachlorobutadiene		5	5.44	ug/L	109	(70-130)	20	5.9
MBLK	Hexachlorobutadiene			<0.5	ug/L				
LCS1	Isopropylbenzene		5	4.86	ug/L	97	(70-130)		
LCS2	Isopropylbenzene		5	4.98	ug/L	100	(70-130)	20	2.4
MBLK	Isopropylbenzene			<0.5	ug/L				
LCS1	m,p-Xylenes		10	10.1	ug/L	101	(70-130)		
LCS2	m,p-Xylenes		10	10.7	ug/L	107	(70-130)	20	5.8
MBLK	m,p-Xylenes			<0.5	ug/L				
LCS1	m-Dichlorobenzene (1,3-DCB)		5	4.84	ug/L	97	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	5.03	ug/L	101	(70-130)	20	3.9
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
LCS1	Methyl Tert-butyl ether (MTBE)		5	4.71	ug/L	94	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.88	ug/L	98	(70-130)	20	3.5
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
LCS1	Naphthalene		5	5.69	ug/L	114	(70-130)		
LCS2	Naphthalene		5	5.50	ug/L	110	(70-130)	20	3.4
MBLK	Naphthalene			<0.5	ug/L				
LCS1	n-Butylbenzene		5	5.24	ug/L	105	(70-130)		
LCS2	n-Butylbenzene		5	5.55	ug/L	111	(70-130)	20	5.8
MBLK	n-Butylbenzene			<0.5	ug/L				
LCS1	n-Propylbenzene		5	4.65	ug/L	93	(70-130)		
LCS2	n-Propylbenzene		5	4.99	ug/L	100	(70-130)	20	7.0
MBLK	n-Propylbenzene			<0.5	ug/L				
LCS1	o-Chlorotoluene		5	4.82	ug/L	96	(70-130)		
LCS2	o-Chlorotoluene		5	5.17	ug/L	103	(70-130)	20	7.0
MBLK	o-Chlorotoluene			<0.5	ug/L				
LCS1	o-Dichlorobenzene (1,2-DCB)		5	5.12	ug/L	102	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	5.06	ug/L	101	(70-130)	20	1.2
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
LCS1	o-Xylene		5	4.86	ug/L	97	(70-130)		
LCS2	o-Xylene		5	5.08	ug/L	102	(70-130)	20	4.4
MBLK	o-Xylene			<0.5	ug/L				
LCS1	p-Chlorotoluene		5	4.91	ug/L	98	(70-130)		
LCS2	p-Chlorotoluene		5	5.08	ug/L	102	(70-130)	20	3.4
MBLK	p-Chlorotoluene			<0.5	ug/L				
LCS1	p-Dichlorobenzene (1,4-DCB)		5	4.79	ug/L	96	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	4.99	ug/L	100	(70-130)	20	4.1
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	p-Isopropyltoluene		5	4.79	ug/L	96	(70-130)		
LCS2	p-Isopropyltoluene		5	4.95	ug/L	99	(70-130)	20	3.3
MBLK	p-Isopropyltoluene			<0.5	ug/L				
LCS1	sec-Butylbenzene		5	4.98	ug/L	100	(70-130)		
LCS2	sec-Butylbenzene		5	5.38	ug/L	108	(70-130)	20	7.7
MBLK	sec-Butylbenzene			<0.5	ug/L				
LCS1	Styrene		5	4.84	ug/L	97	(70-130)		
LCS2	Styrene		5	5.02	ug/L	100	(70-130)	20	3.6
MBLK	Styrene			<0.5	ug/L				
LCS1	tert-amyl Methyl Ether		5	4.54	ug/L	91	(70-130)		
LCS2	tert-amyl Methyl Ether		5	4.65	ug/L	93	(70-130)	20	2.4
MBLK	tert-amyl Methyl Ether			<3	ug/L				
LCS1	tert-Butyl Ethyl Ether		5	4.92	ug/L	98	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	5.03	ug/L	101	(70-130)	20	2.2
MBLK	tert-Butyl Ethyl Ether			<3	ug/L				
LCS1	tert-Butylbenzene		5	5.01	ug/L	100	(70-130)		
LCS2	tert-Butylbenzene		5	5.21	ug/L	104	(70-130)	20	3.9
MBLK	tert-Butylbenzene			<0.5	ug/L				
LCS1	Tetrachloroethylene (PCE)		5	4.42	ug/L	88	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.71	ug/L	94	(70-130)	20	6.3
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
LCS1	Toluene		5	4.82	ug/L	96	(70-130)		
LCS2	Toluene		5	5.14	ug/L	103	(70-130)	20	6.4
MBLK	Toluene			<0.5	ug/L				
LCS1	Toluene-d8 (S)			102	%	102	(70-130)		
LCS2	Toluene-d8 (S)			103	%	103	(70-130)		
MBLK	Toluene-d8 (S)			98.0	%	98	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.91	ug/L	98	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	5.33	ug/L	107	(70-130)	20	8.2
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
LCS1	trans-1,3-Dichloropropene		5	4.79	ug/L	96	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	5.08	ug/L	102	(70-130)	20	5.9
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
LCS1	Trichloroethylene (TCE)		5	4.65	ug/L	93	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.76	ug/L	95	(70-130)	20	2.3
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
LCS1	Trichlorofluoromethane		5	4.55	ug/L	91	(70-130)		
LCS2	Trichlorofluoromethane		5	4.92	ug/L	98	(70-130)	20	7.8

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Trichlorofluoromethane			<0.5	ug/L				
LCS1	Trichlorotrifluoroethane(Freon		5	4.60	ug/L	92	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon		5	5.07	ug/L	101	(70-130)	20	9.7
MBLK	Trichlorotrifluoroethane(Freon			<0.5	ug/L				
LCS1	Vinyl chloride (VC)		5	5.11	ug/L	102	(70-130)		
LCS2	Vinyl chloride (VC)		5	5.32	ug/L	106	(70-130)	20	4.0
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
QC Ref# 836437 - Hexavalent chromium(Dissolved) by EPA 218.6						**Analysis Date: 05/04/2015**			
LCS1	Hexavalent chromium(Dissolved)		2	2.04	ug/L	102	(90-110)		
LCS2	Hexavalent chromium(Dissolved)		2	2.02	ug/L	101	(90-110)		
MBLK	Hexavalent chromium(Dissolved)			<0.020	ug/L				
MRL_CHK	Hexavalent chromium(Dissolved)		0.02	0.0172	ug/L	86	(50-150)		
MS_201504290805	Hexavalent chromium(Dissolved)	0.49	2	2.59	ug/L	105	(90-110)		
MS_201504300304	Hexavalent chromium(Dissolved)	0.47	2	2.60	ug/L	106	(90-110)		
MSD_201504290805	Hexavalent chromium(Dissolved)	0.49	2	2.65	ug/L	108	(90-110)	20	2.3
MSD_201504300304	Hexavalent chromium(Dissolved)	0.47	2	2.58	ug/L	105	(90-110)	20	0.77
QC Ref# 836682 - Volatile Organics by GCMS by EPA 524.2						**Analysis Date: 05/05/2015**			
LCS1	1,1,1,2-Tetrachloroethane		5	4.39	ug/L	88	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	4.69	ug/L	94	(70-130)	20	6.6
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,1,2-Tetrachloroethane		0.5	0.440	ug/L	88	(50-150)		
LCS1	1,1,1-Trichloroethane		5	3.93	ug/L	79	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.70	ug/L	94	(70-130)	20	18
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,1-Trichloroethane		0.5	0.410	ug/L	82	(50-150)		
LCS1	1,1,2,2-Tetrachloroethane		5	4.59	ug/L	92	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	5.66	ug/L	113	(70-130)	20	**21**
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,2,2-Tetrachloroethane		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,1,2-Trichloroethane		5	4.62	ug/L	92	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.53	ug/L	91	(70-130)	20	2.0
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.500	ug/L	100	(50-150)		
LCS1	1,1-Dichloroethane		5	4.32	ug/L	86	(70-130)		
LCS2	1,1-Dichloroethane		5	4.64	ug/L	93	(70-130)	20	7.1
MBLK	1,1-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethane		0.5	0.480	ug/L	96	(50-150)		

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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,1-Dichloroethylene		5	4.93	ug/L	99	(70-130)		
LCS2	1,1-Dichloroethylene		5	5.28	ug/L	106	(70-130)	20	6.9
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.520	ug/L	104	(50-150)		
LCS1	1,1-Dichloropropene		5	4.48	ug/L	90	(70-130)		
LCS2	1,1-Dichloropropene		5	4.94	ug/L	99	(70-130)	20	9.8
MBLK	1,1-Dichloropropene			<0.5	ug/L				
MRL_CHK	1,1-Dichloropropene		0.5	0.470	ug/L	94	(50-150)		
LCS1	1,2,3-Trichlorobenzene		5	4.40	ug/L	88	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	5.15	ug/L	103	(70-130)	20	16
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,3-Trichlorobenzene		0.5	0.580	ug/L	116	(50-150)		
LCS1	1,2,3-Trichloropropane		5	4.67	ug/L	93	(70-130)		
LCS2	1,2,3-Trichloropropane		5	5.55	ug/L	111	(70-130)	20	17
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.5	0.520	ug/L	104	(50-150)		
LCS1	1,2,4-Trichlorobenzene		5	4.55	ug/L	91	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	5.18	ug/L	104	(70-130)	20	13
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.550	ug/L	110	(50-150)		
LCS1	1,2,4-Trimethylbenzene		5	4.39	ug/L	88	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	5.48	ug/L	110	(70-130)	20	**22**
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trimethylbenzene		0.5	0.450	ug/L	90	(50-150)		
LCS1	1,2-Dichloroethane		5	4.32	ug/L	86	(70-130)		
LCS2	1,2-Dichloroethane		5	4.85	ug/L	97	(70-130)	20	12
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)			94.2	%	94	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			95.8	%	96	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			97.6	%	98	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			100	%	100	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)			100	%	100	(70-130)		
LCS1	1,2-Dichloropropane		5	4.49	ug/L	90	(70-130)		
LCS2	1,2-Dichloropropane		5	4.61	ug/L	92	(70-130)	20	2.6
MBLK	1,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,2-Dichloropropane		0.5	0.470	ug/L	94	(50-150)		
LCS1	1,3,5-Trimethylbenzene		5	4.29	ug/L	86	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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Laboratory QC
Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	1,3,5-Trimethylbenzene		5	5.17	ug/L	103	(70-130)	20	19
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,3,5-Trimethylbenzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,3-Dichloropropane		5	4.65	ug/L	93	(70-130)		
LCS2	1,3-Dichloropropane		5	4.55	ug/L	91	(70-130)	20	2.2
MBLK	1,3-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,3-Dichloropropane		0.5	0.480	ug/L	96	(50-150)		
LCS1	2,2-Dichloropropane		5	3.95	ug/L	79	(70-130)		
LCS2	2,2-Dichloropropane		5	4.71	ug/L	94	(70-130)	20	18
MBLK	2,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	2,2-Dichloropropane		0.5	0.490	ug/L	98	(50-150)		
LCS1	2-Butanone (MEK)		50	48.1	ug/L	96	(70-130)		
LCS2	2-Butanone (MEK)		50	48.4	ug/L	97	(70-130)	20	0.83
MBLK	2-Butanone (MEK)			<5.0	ug/L				
MRL_CHK	2-Butanone (MEK)		5	5.36	ug/L	107	(50-150)		
LCS1	4-Bromofluorobenzene (S)			101	%	101	(70-130)		
LCS2	4-Bromofluorobenzene (S)			102	%	102	(70-130)		
MBLK	4-Bromofluorobenzene (S)			98.2	%	98	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			98.4	%	98	(70-130)		
MRLLW	4-Bromofluorobenzene (S)			102	%	102	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	52.8	ug/L	106	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	49.9	ug/L	100	(70-130)	20	5.7
MBLK	4-Methyl-2-Pentanone (MIBK)			<5	ug/L				
MRL_CHK	4-Methyl-2-Pentanone (MIBK)		5	5.03	ug/L	101	(50-150)		
LCS1	Benzene		5	4.39	ug/L	88	(70-130)		
LCS2	Benzene		5	4.80	ug/L	96	(70-130)	20	8.9
MBLK	Benzene			<0.5	ug/L				
MRL_CHK	Benzene		0.5	0.460	ug/L	92	(50-150)		
LCS1	Bromobenzene		5	4.38	ug/L	88	(70-130)		
LCS2	Bromobenzene		5	5.33	ug/L	107	(70-130)	20	20
MBLK	Bromobenzene			<0.5	ug/L				
MRL_CHK	Bromobenzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	Bromochloromethane		5	4.33	ug/L	87	(70-130)		
LCS2	Bromochloromethane		5	5.06	ug/L	101	(70-130)	20	16
MBLK	Bromochloromethane			<0.5	ug/L				
MRL_CHK	Bromochloromethane		0.5	0.430	ug/L	86	(50-150)		
LCS1	Bromodichloromethane		5	4.40	ug/L	88	(70-130)		
LCS2	Bromodichloromethane		5	4.65	ug/L	93	(70-130)	20	5.5

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Bromodichloromethane			<0.5	ug/L				
MRL_CHK	Bromodichloromethane		0.5	0.450	ug/L	90	(50-150)		
LCS1	Bromoethane		5	4.82	ug/L	96	(70-130)		
LCS2	Bromoethane		5	5.58	ug/L	112	(70-130)	20	15
MBLK	Bromoethane			<0.5	ug/L				
MRL_CHK	Bromoethane		0.5	0.390	ug/L	78	(50-150)		
LCS1	Bromoform		5	3.89	ug/L	78	(70-130)		
LCS2	Bromoform		5	4.30	ug/L	86	(70-130)	20	10
MBLK	Bromoform			<0.5	ug/L				
MRL_CHK	Bromoform		0.5	0.410	ug/L	82	(50-150)		
LCS1	Bromomethane (Methyl Bromide)		5	4.99	ug/L	100	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	5.38	ug/L	108	(70-130)	20	7.5
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
MRL_CHK	Bromomethane (Methyl Bromide)		0.5	0.470	ug/L	94	(50-150)		
LCS1	Carbon disulfide		5	4.46	ug/L	89	(70-130)		
LCS2	Carbon disulfide		5	4.70	ug/L	94	(70-130)	20	5.2
MBLK	Carbon disulfide			<0.5	ug/L				
MRL_CHK	Carbon disulfide		0.5	0.510	ug/L	102	(50-150)		
LCS1	Carbon Tetrachloride		5	4.13	ug/L	83	(70-130)		
LCS2	Carbon Tetrachloride		5	4.47	ug/L	89	(70-130)	20	7.9
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.440	ug/L	88	(50-150)		
LCS1	Chlorobenzene		5	4.73	ug/L	95	(70-130)		
LCS2	Chlorobenzene		5	4.64	ug/L	93	(70-130)	20	1.9
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.470	ug/L	94	(50-150)		
LCS1	Chlorodibromomethane		5	4.19	ug/L	84	(70-130)		
LCS2	Chlorodibromomethane		5	4.41	ug/L	88	(70-130)	20	5.1
MBLK	Chlorodibromomethane			<0.5	ug/L				
MRL_CHK	Chlorodibromomethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	Chloroethane		5	4.10	ug/L	82	(70-130)		
LCS2	Chloroethane		5	4.89	ug/L	98	(70-130)	20	18
MBLK	Chloroethane			<0.5	ug/L				
MRL_CHK	Chloroethane		0.5	0.570	ug/L	114	(50-150)		
LCS1	Chloroform (Trichloromethane)		5	4.54	ug/L	91	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.98	ug/L	100	(70-130)	20	9.2
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
MRL_CHK	Chloroform (Trichloromethane)		0.5	0.580	ug/L	116	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Chloromethane(Methyl Chloride)		5	4.69	ug/L	94	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	5.14	ug/L	103	(70-130)	20	9.2
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
MRL_CHK	Chloromethane(Methyl Chloride)		0.5	0.530	ug/L	106	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	4.47	ug/L	89	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	4.80	ug/L	96	(70-130)	20	7.1
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.460	ug/L	92	(50-150)		
LCS1	cis-1,3-Dichloropropene		5	4.26	ug/L	85	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	4.30	ug/L	86	(70-130)	20	0.94
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	cis-1,3-Dichloropropene		0.5	0.440	ug/L	88	(50-150)		
LCS1	Dibromomethane		5	4.59	ug/L	92	(70-130)		
LCS2	Dibromomethane		5	4.83	ug/L	97	(70-130)	20	5.1
MBLK	Dibromomethane			<0.5	ug/L				
MRL_CHK	Dibromomethane		0.5	0.500	ug/L	100	(50-150)		
LCS1	Dichlorodifluoromethane		5	5.08	ug/L	102	(70-130)		
LCS2	Dichlorodifluoromethane		5	5.44	ug/L	109	(70-130)	20	6.8
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
MRL_CHK	Dichlorodifluoromethane		0.5	0.540	ug/L	108	(50-150)		
LCS1	Dichloromethane		5	4.53	ug/L	91	(70-130)		
LCS2	Dichloromethane		5	4.86	ug/L	97	(70-130)	20	7.0
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	Di-isopropyl ether		5	4.46	ug/L	89	(70-130)		
LCS2	Di-isopropyl ether		5	4.70	ug/L	94	(70-130)	20	5.2
MBLK	Di-isopropyl ether			<3.0	ug/L				
MRL_CHK	Di-isopropyl ether		0.5	0.510	ug/L	102	(50-150)		
LCS1	Ethyl benzene		5	4.81	ug/L	96	(70-130)		
LCS2	Ethyl benzene		5	4.88	ug/L	98	(70-130)	20	1.4
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.470	ug/L	94	(50-150)		
LCS1	Hexachlorobutadiene		5	4.30	ug/L	86	(70-130)		
LCS2	Hexachlorobutadiene		5	5.25	ug/L	105	(70-130)	20	20
MBLK	Hexachlorobutadiene			<0.5	ug/L				
MRL_CHK	Hexachlorobutadiene		0.5	0.590	ug/L	118	(50-150)		
LCS1	Isopropylbenzene		5	4.32	ug/L	86	(70-130)		
LCS2	Isopropylbenzene		5	5.24	ug/L	105	(70-130)	20	19

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Isopropylbenzene			<0.5	ug/L				
MRL_CHK	Isopropylbenzene		0.5	0.470	ug/L	94	(50-150)		
LCS1	m,p-Xylenes		10	9.71	ug/L	97	(70-130)		
LCS2	m,p-Xylenes		10	9.66	ug/L	97	(70-130)	20	0.52
MBLK	m,p-Xylenes			<0.5	ug/L				
MRL_CHK	m,p-Xylenes		1	0.920	ug/L	92	(50-150)		
MRLLW	m,p-Xylenes		0.5	0.540	ug/L	108	(50-150)		
LCS1	m-Dichlorobenzene (1,3-DCB)		5	4.26	ug/L	85	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	5.34	ug/L	107	(70-130)	20	**23**
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
MRL_CHK	m-Dichlorobenzene (1,3-DCB)		0.5	0.490	ug/L	98	(50-150)		
LCS1	Methyl Tert-butyl ether (MTBE)		5	4.46	ug/L	89	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.77	ug/L	95	(70-130)	20	6.7
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
MRL_CHK	Methyl Tert-butyl ether (MTBE)		0.5	0.550	ug/L	110	(50-150)		
LCS1	Naphthalene		5	4.49	ug/L	90	(70-130)		
LCS2	Naphthalene		5	5.28	ug/L	106	(70-130)	20	16
MBLK	Naphthalene			<0.5	ug/L				
MRL_CHK	Naphthalene		0.5	0.550	ug/L	110	(50-150)		
LCS1	n-Butylbenzene		5	4.34	ug/L	87	(70-130)		
LCS2	n-Butylbenzene		5	5.15	ug/L	103	(70-130)	20	17
MBLK	n-Butylbenzene			<0.5	ug/L				
MRL_CHK	n-Butylbenzene		0.5	0.580	ug/L	116	(50-150)		
LCS1	n-Propylbenzene		5	4.14	ug/L	83	(70-130)		
LCS2	n-Propylbenzene		5	4.99	ug/L	100	(70-130)	20	19
MBLK	n-Propylbenzene			<0.5	ug/L				
MRL_CHK	n-Propylbenzene		0.5	0.530	ug/L	106	(50-150)		
LCS1	o-Chlorotoluene		5	4.45	ug/L	89	(70-130)		
LCS2	o-Chlorotoluene		5	5.38	ug/L	108	(70-130)	20	19
MBLK	o-Chlorotoluene			<0.5	ug/L				
MRL_CHK	o-Chlorotoluene		0.5	0.500	ug/L	100	(50-150)		
LCS1	o-Dichlorobenzene (1,2-DCB)		5	4.61	ug/L	92	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	5.23	ug/L	105	(70-130)	20	13
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
MRL_CHK	o-Dichlorobenzene (1,2-DCB)		0.5	0.540	ug/L	108	(50-150)		
LCS1	o-Xylene		5	4.66	ug/L	93	(70-130)		
LCS2	o-Xylene		5	4.85	ug/L	97	(70-130)	20	4.0
MBLK	o-Xylene			<0.5	ug/L				

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	o-Xylene		0.5	0.470	ug/L	94	(50-150)		
LCS1	p-Chlorotoluene		5	4.27	ug/L	85	(70-130)		
LCS2	p-Chlorotoluene		5	5.25	ug/L	105	(70-130)	20	**21**
MBLK	p-Chlorotoluene			<0.5	ug/L				
MRL_CHK	p-Chlorotoluene		0.5	0.460	ug/L	92	(50-150)		
LCS1	p-Dichlorobenzene (1,4-DCB)		5	4.37	ug/L	87	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	5.27	ug/L	105	(70-130)	20	19
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
MRL_CHK	p-Dichlorobenzene (1,4-DCB)		0.5	0.520	ug/L	104	(50-150)		
LCS1	p-Isopropyltoluene		5	4.29	ug/L	86	(70-130)		
LCS2	p-Isopropyltoluene		5	5.06	ug/L	101	(70-130)	20	17
MBLK	p-Isopropyltoluene			<0.5	ug/L				
MRL_CHK	p-Isopropyltoluene		0.5	0.500	ug/L	100	(50-150)		
LCS1	sec-Butylbenzene		5	4.36	ug/L	87	(70-130)		
LCS2	sec-Butylbenzene		5	5.35	ug/L	107	(70-130)	20	20
MBLK	sec-Butylbenzene			<0.5	ug/L				
MRL_CHK	sec-Butylbenzene		0.5	0.490	ug/L	98	(50-150)		
LCS1	Styrene		5	4.74	ug/L	95	(70-130)		
LCS2	Styrene		5	4.93	ug/L	99	(70-130)	20	3.9
MBLK	Styrene			<0.5	ug/L				
MRL_CHK	Styrene		0.5	0.470	ug/L	94	(50-150)		
LCS1	tert-amyl Methyl Ether		5	4.55	ug/L	91	(70-130)		
LCS2	tert-amyl Methyl Ether		5	4.86	ug/L	97	(70-130)	20	6.6
MBLK	tert-amyl Methyl Ether			<3	ug/L				
MRL_CHK	tert-amyl Methyl Ether		0.5	0.490	ug/L	98	(50-150)		
LCS1	tert-Butyl Ethyl Ether		5	4.45	ug/L	89	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	4.88	ug/L	98	(70-130)	20	9.2
MBLK	tert-Butyl Ethyl Ether			<3	ug/L				
MRL_CHK	tert-Butyl Ethyl Ether		0.5	0.510	ug/L	102	(50-150)		
LCS1	tert-Butylbenzene		5	4.35	ug/L	87	(70-130)		
LCS2	tert-Butylbenzene		5	5.39	ug/L	108	(70-130)	20	**21**
MBLK	tert-Butylbenzene			<0.5	ug/L				
MRL_CHK	tert-Butylbenzene		0.5	0.500	ug/L	100	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	4.45	ug/L	89	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.55	ug/L	91	(70-130)	20	2.2
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.470	ug/L	94	(50-150)		
LCS1	Toluene		5	4.52	ug/L	90	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory QC
Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Toluene		5	4.58	ug/L	92	(70-130)	20	1.3
MBLK	Toluene			<0.5	ug/L				
MRL_CHK	Toluene		0.5	0.510	ug/L	102	(50-150)		
LCS1	Toluene-d8 (S)			104	%	104	(70-130)		
LCS2	Toluene-d8 (S)			93.4	%	93	(70-130)		
MBLK	Toluene-d8 (S)			101	%	101	(70-130)		
MRL_CHK	Toluene-d8 (S)			99.6	%	100	(70-130)		
MRLLW	Toluene-d8 (S)			101	%	101	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.39	ug/L	88	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	5.00	ug/L	100	(70-130)	20	13
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.520	ug/L	104	(50-150)		
LCS1	trans-1,3-Dichloropropene		5	4.24	ug/L	85	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	4.20	ug/L	84	(70-130)	20	0.95
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	trans-1,3-Dichloropropene		0.5	0.420	ug/L	84	(50-150)		
LCS1	Trichloroethylene (TCE)		5	4.62	ug/L	92	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.81	ug/L	96	(70-130)	20	4.0
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.450	ug/L	90	(50-150)		
LCS1	Trichlorofluoromethane		5	4.54	ug/L	91	(70-130)		
LCS2	Trichlorofluoromethane		5	4.84	ug/L	97	(70-130)	20	6.4
MBLK	Trichlorofluoromethane			<0.5	ug/L				
MRL_CHK	Trichlorofluoromethane		0.5	0.500	ug/L	100	(50-150)		
LCS1	Trichlorotrifluoroethane(Freon		5	4.81	ug/L	96	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon		5	5.07	ug/L	101	(70-130)	20	5.3
MBLK	Trichlorotrifluoroethane(Freon			<0.5	ug/L				
MRL_CHK	Trichlorotrifluoroethane(Freon		0.5	0.510	ug/L	102	(50-150)		
LCS1	Vinyl chloride (VC)		5	4.66	ug/L	93	(70-130)		
LCS2	Vinyl chloride (VC)		5	5.22	ug/L	104	(70-130)	20	11
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.490	ug/L	98	(50-150)		
MRLLW	Vinyl chloride (VC)		0.25	0.270	ug/L	108	(50-150)		
QC Ref# 836781 - Fluoride by SM 4500F-C						**Analysis Date: 05/06/2015**			
LCS1	Fluoride		1	0.993	mg/L	99	(81-116)		
LCS2	Fluoride		1	1.02	mg/L	102	(81-116)	20	2.7
MBLK	Fluoride			<0.05	mg/L				
MRL_CHK	Fluoride		0.05	0.0460	mg/L	92	(50-150)		

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RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_201504290484	Fluoride	0.55	1	1.17	mg/L	**62**	(80-120)		
MS_201505060043	Fluoride	0.70	1	1.68	mg/L	98	(80-120)		
MSD_201504290484	Fluoride	0.55	1	1.16	mg/L	**61**	(80-120)	20	0.86
MSD_201505060043	Fluoride	0.70	1	1.69	mg/L	99	(80-120)	20	0.59
QC Ref# 836841 - 1,4-Dioxane by EPA 522						**Analysis Date: 05/05/2015**			
LCS1	Dioxane		20	18.3	ug/L	92	(70-130)		
MBLK	Dioxane			<1	ug/L				
MRLLW	Dioxane		0.07	0.0760	ug/L	109	(50-150)		
MS1_201504270074	Dioxane	1.3	0.07	1.35	ug/L	69	(50-150)		
MSD1_201504270074	Dioxane	1.3	0.07	1.46	ug/L	**231**	(50-150)	20	7.8
LCS1	Dioxane-d8 (S)			92.8	%	93	(70-130)		
MBLK	Dioxane-d8 (S)			94.8	%	95	(70-130)		
MRLLW	Dioxane-d8 (S)			97.7	%	98	(70-130)		
MS1_201504270074	Dioxane-d8 (S)			89.8	%	90	(70-130)		
MSD1_201504270074	Dioxane-d8 (S)			93.8	%	94	(70-130)		
QC Ref# 837189 - Disinfection ByProducts by 300.0 by EPA 300.0						**Analysis Date: 05/07/2015**			
LCS1	Chlorate by IC		200	199	ug/L	100	(90-110)		
LCS2	Chlorate by IC		200	203	ug/L	101	(90-110)	20	2.0
MBLK	Chlorate by IC			<10	ug/L				
MRL_CHK	Chlorate by IC		10	10.1	ug/L	101	(75-125)		
MS_201504300031	Chlorate by IC	ND	100	98.7	ug/L	99	(80-120)		
MS_201505050590	Chlorate by IC	ND	100	101	ug/L	97	(80-120)		
MSD_201504300031	Chlorate by IC	ND	100	97.9	ug/L	98	(80-120)	15	0.81
MSD_201505050590	Chlorate by IC	ND	100	103	ug/L	98	(80-120)	15	2.0
QC Ref# 837703 - 1,2,3-Trichloropropane (SIM) by CASRL 524M-TCP						**Analysis Date: 05/08/2015**			
DUP_201505050154	1,2,3-Trichloropropane	0.407	0.05	0.366	ug/L		(0-20)	20	11
DUP_201505060477	1,2,3-Trichloropropane	0.378	0.05	0.380	ug/L		(0-20)	20	0.58
LCS1	1,2,3-Trichloropropane		0.01	0.0104	ug/L	104	(80-120)		
LCS2	1,2,3-Trichloropropane		0.01	0.00996	ug/L	100	(80-120)	20	4.3
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MBLK	1,2,3-Trichloropropane			<0.005	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.005	0.00624	ug/L	125	(50-150)		
DUP_201505050154	Toluene-d8 (S)		1300	87.8	%	88	(70-130)		
DUP_201505060477	Toluene-d8 (S)		1300	96.4	%	96	(70-130)		
LCS1	Toluene-d8 (S)		130	95.2	%	95	(70-130)		
LCS2	Toluene-d8 (S)		130	88.8	%	89	(70-130)		
MBLK	Toluene-d8 (S)			93.6	%	94	(70-130)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Laboratory QC
Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Toluene-d8 (S)			93.4	%	93	(70-130)		
MRL_CHK	Toluene-d8 (S)		130	96.4	%	96	(70-130)		
QC Ref# 839102 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 05/17/2015**			
LCS1	NDMA-D6 (S)		20	93.5	%	94	(70-130)		
MBLK	NDMA-D6 (S)			116	%	116	(70-130)		
MRL_CHK	NDMA-D6 (S)		20	125	%	125	(70-130)		
MS1_201503030241	NDMA-D6 (S)		20	91.0	%	91	(70-130)		
MSD1_201503030241	NDMA-D6 (S)		20	110	%	110	(70-130)		
LCS1	N-Nitroso dimethylamine (NDMA)		40	35.1	ng/L	88	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2	2.16	ng/L	108	(50-150)		
MS1_201503030241	N-Nitroso dimethylamine (NDMA)	4.2	2	5.79	ng/L	80	(50-150)		
MSD1_201503030241	N-Nitroso dimethylamine (NDMA)	4.2	2	5.79	ng/L	81	(50-150)	30	0.0
LCS1	N-Nitrosodibutylamine (NDBA)		40	33.2	ng/L	83	(70-130)		
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/L				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2	2.13	ng/L	106	(50-150)		
MS1_201503030241	N-Nitrosodibutylamine (NDBA)	ND	2	1.83	ng/L	69	(50-150)		
MSD1_201503030241	N-Nitrosodibutylamine (NDBA)	ND	2	2.28	ng/L	91	(50-150)	30	22
LCS1	N-Nitrosodiethylamine (NDEA)		40	32.4	ng/L	81	(70-130)		
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/L				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2	2.26	ng/L	113	(50-150)		
MS1_201503030241	N-Nitrosodiethylamine (NDEA)	ND	2	1.87	ng/L	94	(50-150)		
MSD1_201503030241	N-Nitrosodiethylamine (NDEA)	ND	2	2.38	ng/L	119	(50-150)	30	24
LCS1	N-Nitrosodi-n-propylamin(NDPA)		40	31.1	ng/L	78	(70-130)		
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/L				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2	2.11	ng/L	106	(50-150)		
MS1_201503030241	N-Nitrosodi-n-propylamin(NDPA)	ND	2	2.11	ng/L	63	(50-150)		
MSD1_201503030241	N-Nitrosodi-n-propylamin(NDPA)	ND	2	2.56	ng/L	85	(50-150)	30	19
LCS1	N-Nitrosomethylethylamin(NMEA)		40	37.2	ng/L	93	(70-130)		
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/L				
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2	2.32	ng/L	116	(50-150)		
MS1_201503030241	N-Nitrosomethylethylamin(NMEA)	ND	2	1.99	ng/L	91	(50-150)		
MSD1_201503030241	N-Nitrosomethylethylamin(NMEA)	ND	2	2.49	ng/L	116	(50-150)	30	22
LCS1	N-Nitrosomorpholine		40	35.6	ng/l	89	(70-130)		
MBLK	N-Nitrosomorpholine			<2	ng/l				
MRL_CHK	N-Nitrosomorpholine		2	2.20	ng/l	110	(50-150)		
MS1_201503030241	N-Nitrosomorpholine		2	1.80	ng/l	90	(50-150)		
MSD1_201503030241	N-Nitrosomorpholine		2	2.06	ng/l	103	(50-150)	30	14

Spike recovery is already corrected for native results.
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Laboratory QC
Report: 532198

Tidewater, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	N-Nitrosopiperidine (NPIP)		40	31.3	ng/L	78	(70-130)		
MBLK	N-Nitrosopiperidine (NPIP)			<2	ng/L				
MRL_CHK	N-Nitrosopiperidine (NPIP)		2	2.16	ng/L	108	(50-150)		
MS1_201503030241	N-Nitrosopiperidine (NPIP)		2	2.02	ng/L	101	(50-150)		
MSD1_201503030241	N-Nitrosopiperidine (NPIP)		2	2.52	ng/l	126	(50-150)	30	22
LCS1	N-Nitrosopyrollidine (NPYR)		40	32.9	ng/L	82	(70-130)		
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/L				
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2	1.96	ng/L	98	(50-150)		
MS1_201503030241	N-Nitrosopyrollidine (NPYR)	ND	2	2.30	ng/L	80	(50-150)		
MSD1_201503030241	N-Nitrosopyrollidine (NPYR)	ND	2	2.70	ng/L	99	(50-150)	30	16

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CLIENT: **EUROFINS EATON ANALYTICAL**

PROJECT: **532198**

SDG: **15D209**

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GC/MS-SVOA	**	3000 –
GC-VOA	**	4000 –
GC-SVOA	**	5000 –
HPLC	METHOD 8330	6000 – 6007
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 05-12-2015
EMAX Batch No.: 15D209

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 532198

Enclosed is the Laboratory report for samples received on 04/30/15.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
201504290806	D209-01	04/29/15	WATER	NITROAROMATICS & NITRAMINES

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

eurofins | Eaton Analytical

Submittal Form & Purchase Order 99-34771

~~15D209~~ 15D209 Date: 4/30/2015

REPORTING REQUIRMENTS:** ***Do Not Combine Reports with any other samples submitted under different Folder Numbers!
Report & Invoice must have the Folder # **532198** Sub PO# **99-34771** and Job # **1000014**

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Ship To:
EMAX Laboratories, Inc.
1835 W. 205th St.

Torrance, CA 90501

Phone: 310-618-8889 Fax: 310-618-0818

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified State Certification # & Exp Date for requested tests + matrix.

Samples from: **CALIFORNIA**

Folder #:	Report Due:	Sub PO #:
532198	05/15/2015	99-34771

JLS	Client Sample ID for reference only	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
	201504290806 MW-10		04/29/15 0905	DW		
EPA 8330	@8330EDD Emax	@8330EDD Emax				

Relinquished by: Sample Control Date _____ Time _____

Received by: _____ Date _____ Time _____

Relinquished by: Sample Control Date _____ Time _____

Received by: Sh Verma Date 04/30/15 Time 1445

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN 15D209
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Sheifama
☐ EMAX Courier ☑ Client Delivery		Date 04-30-15 Time 1445

COC INSPECTION

☑ Client Name	☑ Client PM/FC	☐ Sampler Name	☑ Sampling Date/Time	☑ Sample ID	☑ Matrix
☑ Address	☐ Tel # / Fax #	☐ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
Safety Issues (if any)	☑ High concentrations expected	☐ From Superfund Site	☐ Rad screening required		

Note:

PACKAGING INSPECTION

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☐ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 2.5 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C
Thermometer:	*A - S/N* _____	*B - S/N* 140252070	*C - S/N* 140252067	*D - S/N* _____	

FM 1/24/15

Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.**

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action

04/30/15

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

4/30

NOTES/OBSERVATIONS:

LEGEND:

☐ **Continue to next page.**

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in _____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in _____	D16	Preservation not indicated in _____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in _____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	_____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	_____
D10	No initial/date on corrections in COC/label	D22	_____	R10	_____
D11	Container count mismatch COC vs received	D23	_____	R11	_____
D12	Container size mismatch COC vs received	D24	_____	R12	_____

REVIEWS:

Sample Labeling SO **Date** 04-30-15 / 4/30/15

SRF **Date** 4/30/15

PM **Date** 4/30/15

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

532198

METHOD 8330
EXPLOSIVES

SDG#: 15D209

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 532198

SDG : 15D209

METHOD 8330
EXPLOSIVES

One 1) water sample was received on 04/30/15 to be analyzed for Explosives in accordance with Method 8330 and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. EXE001WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. EXE001WL/EXE001WC - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : EUROFINS EATON ANALYTICAL
Project : 532198

SDG NO. : 15D209
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXE001WB	1	NA	05/06/1514:25	05/04/1511:50	XE06004A	XE06002A	EXE001W	Method Blank
LCS1W	EXE001WL	1	NA	05/06/1514:59	05/04/1511:50	XE06005A	XE06002A	EXE001W	Lab Control Sample (LCS)
LCD1W	EXE001WC	1	NA	05/06/1515:33	05/04/1511:50	XE06006A	XE06002A	EXE001W	LCS Duplicate
201504290806	D209-01	1	NA	05/06/1517:16	05/04/1511:50	XE06009A	XE06002A	EXE001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/29/15
Project	: 532198	Date Received:	04/30/15
Batch No.	: 15D209	Date Extracted:	05/04/15 11:50
Sample ID:	201504290806	Date Analyzed:	05/06/15 17:16
Lab Samp ID:	D209-01	Dilution Factor:	1
Lab File ID:	XE06009A	Matrix	: WATER
Ext Btch ID:	EXE001W	% Moisture	: NA
Calib. Ref.:	XE06002A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.85	4.000	96.2	30-160

Note: All positive results are confirmed by Biphenyl column

QC SUMMARIES

METHOD 8330
EXPLOSIVES

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	NA
Project	: 532198	Date Received:	05/04/15
Batch No.	: 15D209	Date Extracted:	05/04/15 11:50
Sample ID:	MBLK1W	Date Analyzed:	05/06/15 14:25
Lab Samp ID:	EXE001WB	Dilution Factor:	1
Lab File ID:	XE06004A	Matrix :	WATER
Ext Btch ID:	EXE001W	% Moisture :	NA
Calib. Ref.:	XE06002A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
HMX	ND	0.40	0.20
RDX	ND	0.40	0.20
1,3,5-TNB	ND	0.40	0.20
1,3-DNB	ND	0.40	0.20
TETRYL	ND	0.40	0.20
NITROBENZENE	ND	0.40	0.20
2,4,6-TNT	ND	0.40	0.20
4-AM-2,6-DNT	ND	0.40	0.20
2-AM-4,6-DNT	ND	0.40	0.20
2,6-DNT	ND	0.40	0.20
2,4-DNT	ND	0.40	0.20
2-NITROTOLUENE	ND	0.40	0.20
3-NITROTOLUENE	ND	0.40	0.20
4-NITROTOLUENE	ND	0.40	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.90	4.000	97.4	70-140

Note: All positive results are confirmed by Biphenyl column

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 532198
BATCH NO.: 15D209
METHOD: METHOD 8330

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	EXE001WB	EXE001WL	EXE001WC		
LAB FILE ID:	XE06004A	XE06005A	XE06006A		
DATE EXTRACTED:	05/04/1511:50	05/04/1511:50	05/04/1511:50	DATE COLLECTED:	NA
DATE ANALYZED:	05/06/1514:25	05/06/1514:59	05/06/1515:33	DATE RECEIVED:	05/04/15
PREP. BATCH:	EXE001W	EXE001W	EXE001W		
CALIB. REF:	XE06002A	XE06002A	XE06002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
HMX	ND	4.00	3.36	84	4.00	3.65	91	8	60-130	30
RDX	ND	4.00	3.21	80	4.00	3.33	83	4	60-130	30
1,3,5-TNB	ND	4.00	3.82	95	4.00	3.86	96	1	30-130	30
1,3-DNB	ND	4.00	3.54	88	4.00	3.60	90	2	60-130	30
Tetryl	ND	4.00	4.10	103	4.00	3.98	99	3	70-130	30
Nitrobenzene	ND	4.00	3.25	81	4.00	3.32	83	2	60-130	30
2,4,6-TNT	ND	4.00	3.79	95	4.00	3.94	99	4	70-130	30
4-AM-2,6-DNT	ND	4.00	3.44	86	4.00	3.67	92	7	70-130	30
2-AM-4,6-DNT	ND	4.00	3.72	93	4.00	3.85	96	3	70-130	30
2,6-DNT	ND	4.00	3.69	92	4.00	3.85	96	4	70-130	30
2,4-DNT	ND	4.00	3.86	96	4.00	4.03	101	4	70-130	30
2-Nitrotoluene	ND	4.00	3.34	83	4.00	3.42	86	2	70-130	30
3-Nitrotoluene	ND	4.00	3.28	82	4.00	3.62	91	10	70-130	30
4-Nitrotoluene	ND	4.00	3.37	84	4.00	3.71	93	10	70-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
3,4-Dinitrotoluene	4.00	3.99	100	4.00	4.12	103	70-140