ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

This attachment contains the laboratory analytical reports prepared by Pace Analytical Environmental Sciences (formerly BC Laboratories, Inc.), of Bakersfield, California.

Date of Report: 03/24/2022

David Conner

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Client Project:	4Q21
BCL Project:	JPL- GW Monitoring Wells-CLP
BCL Work Order:	2201950
Invoice ID:	

Enclosed are the results of analyses for samples received by the laboratory on 1/31/2022. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1001281280

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Operations Manager

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

Table of Contents

BC Laboratories, Inc. — Chain of Custody Form

*Required Fields

Page 1 of 1

Report To Client:* Tidewater, Inc.	Project Description:* JPL-GW Monitoring
Attn:* David Conner	Project Code:* 4Q21
Street Address:* 3761 Attucks Drive	Sampler (s):* Blaine Tech
City:* Powell State:* OH Zip:* 43065	L. Henderson
Phone#:* (626) 298 - 5715 Fax#: (614) 792 - 2897	
Email Address: david.conner@tideh2o.net	
Submission #: 22-01950	

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 -218.6 (mg/L)	Cl, NO3, NO2, SO4		Orthophosphate 365.1			
-1	TB-1-013122	1-31-22	0800	W	X	X	X	X						
-2	MW-20-5-013122		0900	W	X	X	X	X						
-3	MW-20-4-013122		1245	W	X	X	X	X						
-4	MW-20-3-013122		1330	W	X	X	X	X						
-5	MW-20-2-013122		1150	W	X	X	X	X						
-6	DUP-1-1Q22		1200	W	X	X	X	X						
-7	SB-1-013122		~~1420~~ 1245	W	X	X	X	X						
-8	EB-1-013122		1345	W	X	X	X	X						

Analysis Requested

Billing

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

Notes

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:	1/31/22	1430	1.Received By:	1/31/22	1430
2. Relinquished By:	1/31/22	1645	2.Received By:	1-31-22	1645
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 2201950 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 22-01950

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

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

FREE LIQUID
YES ☐ NO ☑
W / S

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

Custody Seals Ice Chest ☐ 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: 337 Date/Time 1-31-22

Temperature: (A) 3.3 °C / (C) 3.2 °C Analyst Init JD 1645

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES		E,F	E,F	E,F	E,F	E,F	E,F	E,F	K	
2oz Cr^{+6}		D	D	D	D	D	D	D	PRE 1/31/22	
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		G,H	G,H	G,H	G,H	G,H	G,H	G,H		
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK UNPRES	A									
40ml VOA VIAL CLWBEC1 preserved ~~UNPRES~~ PRE 1/31/22		A-C	A-C	A-C	A-C	A-C	A-C	A-C		
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: ~~2C~~ ~~has~~ PRE 1/31/22 has no description, it was packaged with ~~other~~ similar amber vials

Sample Numbering Completed By: PRE Date/Time: 1/31/22 1830

A = Actual / C = Corrected

Rev 22 04/13/21

(S:\WPDocs\WordPerfect\LAS_DOCS\FORMS\SAMREC rev 20)

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2201950-01	**COC Number:**	---	**Receive Date:**	01/31/2022 16:40
	Project Number:	JPL-GW-Monitoring	**Sampling Date:**	01/31/2022 08:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-1-013122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Trip Blank
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-1-013122	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2201950-02	**COC Number:**	---	**Receive Date:**	01/31/2022 16:40
	Project Number:	JPL-GW-Monitoring	**Sampling Date:**	01/31/2022 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-5-013122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-5-013122	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2201950-03	**COC Number:**	---	**Receive Date:**	01/31/2022 16:40
	Project Number:	JPL-GW-Monitoring	**Sampling Date:**	01/31/2022 12:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-4-013122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-4-013122	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc. - Powell
3761 Attucks Drive
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Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2201950-04	**COC Number:**	---	**Receive Date:**	01/31/2022 16:40
	Project Number:	JPL-GW-Monitoring	**Sampling Date:**	01/31/2022 13:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-3-013122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-3-013122	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2201950-05	**COC Number:**	---	**Receive Date:**	01/31/2022 16:40
	Project Number:	JPL-GW-Monitoring	**Sampling Date:**	01/31/2022 11:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-2-013122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-2-013122	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2201950-06	**COC Number:**	---	**Receive Date:**	01/31/2022 16:40
	Project Number:	JPL-GW-Monitoring	**Sampling Date:**	01/31/2022 12:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-1-1Q22	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-1-1Q22	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2201950-07	**COC Number:**	---	**Receive Date:**	01/31/2022 16:40
	Project Number:	JPL-GW-Monitoring	**Sampling Date:**	01/31/2022 14:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-1-013122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): SB-1-013122	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2201950-08	**COC Number:**	---	**Receive Date:**	01/31/2022 16:40
	Project Number:	JPL-GW-Monitoring	**Sampling Date:**	01/31/2022 13:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-1-013122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-1-013122	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-01 | **Client Sample Name:** JPL-GW-Monitoring, TB-1-013122, 1/31/2022 8:00:00AM, Blaine Tech - L. Henderson

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-01 | **Client Sample Name:** JPL-GW-Monitoring, TB-1-013122, 1/31/2022 8:00:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-01 | **Client Sample Name:** JPL-GW-Monitoring, TB-1-013122, 1/31/2022 8:00:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 19:04	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2201950-01 | **Client Sample Name:** JPL-GW-Monitoring, TB-1-013122, 1/31/2022 8:00:00AM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 19:04	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

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Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-02 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-5-013122, 1/31/2022 9:00:00AM, Blaine Tech - L. Henderson

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-02 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-5-013122, 1/31/2022 9:00:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	**0.14**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-02 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-5-013122, 1/31/2022 9:00:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 19:29	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2201950-02 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-5-013122, 1/31/2022 9:00:00AM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 19:29	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2201950-02 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-5-013122, 1/31/2022 9:00:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00013**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 14:36	02/03/22 11:18	SAV	IC-4	1	B130866	No Prep
2	EPA-200.8	02/02/22 17:20	02/03/22 07:41	KHS	PE-EL2	1	B130830	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-03 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-4-013122, 1/31/2022 12:45:00PM, Blaine Tech - L. Henderson

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-03 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-4-013122, 1/31/2022 12:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	**0.51**	**ug/L**	**0.50**	**0.48**	**EPA-524.2**	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-03 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-4-013122, 1/31/2022 12:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.3	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 19:53	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2201950-03 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-4-013122, 1/31/2022 12:45:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 19:53	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2201950-03 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-4-013122, 1/31/2022 12:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00025**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 14:36	02/03/22 12:16	JAT	IC-4	1	B130866	No Prep
2	EPA-200.8	02/02/22 17:20	02/03/22 07:42	KHS	PE-EL2	1	B130830	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-04 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-3-013122, 1/31/2022 1:30:00PM, Blaine Tech - L. Henderson

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-04 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-3-013122, 1/31/2022 1:30:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	**0.39**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.66**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	**0.56**	**ug/L**	**0.50**	**0.48**	**EPA-524.2**	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-04 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-3-013122, 1/31/2022 1:30:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 20:18	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2201950-04 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-3-013122, 1/31/2022 1:30:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 20:18	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2201950-04 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-3-013122, 1/31/2022 1:30:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00017**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	**1.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 14:36	02/03/22 12:25	JAT	IC-4	1	B130866	No Prep
2	EPA-200.8	02/02/22 17:20	02/03/22 07:44	KHS	PE-EL2	1	B130830	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-05 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-2-013122, 1/31/2022 11:30:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.58**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-05 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-2-013122, 1/31/2022 11:30:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.52**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.60**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-05 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-2-013122, 1/31/2022 11:30:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 20:42	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2201950-05 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-2-013122, 1/31/2022 11:30:00AM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 20:42	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2201950-05 | **Client Sample Name:** JPL-GW-Monitoring, MW-20-2-013122, 1/31/2022 11:30:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000053**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	**1.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 14:36	02/03/22 12:35	JAT	IC-4	1	B130866	No Prep
2	EPA-200.8	02/02/22 17:20	02/03/22 07:52	KHS	PE-EL2	1	B130830	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-06 | **Client Sample Name:** JPL-GW-Monitoring, DUP-1-1Q22, 1/31/2022 12:00:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.60**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-06 | **Client Sample Name:** JPL-GW-Monitoring, DUP-1-1Q22, 1/31/2022 12:00:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.35**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.47**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-06 | **Client Sample Name:** JPL-GW-Monitoring, DUP-1-1Q22, 1/31/2022 12:00:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.5	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 21:07	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2201950-06 | **Client Sample Name:** JPL-GW-Monitoring, DUP-1-1Q22, 1/31/2022 12:00:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 21:07	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2201950-06 | **Client Sample Name:** JPL-GW-Monitoring, DUP-1-1Q22, 1/31/2022 12:00:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000081**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 14:36	02/03/22 12:45	JAT	IC-4	1	B130866	No Prep
2	EPA-200.8	02/02/22 17:20	02/03/22 07:54	KHS	PE-EL2	1	B130830	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-07 | **Client Sample Name:** JPL-GW-Monitoring, SB-1-013122, 1/31/2022 2:20:00PM, Blaine Tech - L. Henderson

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-07 | **Client Sample Name:** JPL-GW-Monitoring, SB-1-013122, 1/31/2022 2:20:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-07 | **Client Sample Name:** JPL-GW-Monitoring, SB-1-013122, 1/31/2022 2:20:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 21:31	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2201950-07 | **Client Sample Name:** JPL-GW-Monitoring, SB-1-013122, 1/31/2022 2:20:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 21:31	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2201950-07 | **Client Sample Name:** JPL-GW-Monitoring, SB-1-013122, 1/31/2022 2:20:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000055**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 14:36	02/03/22 12:54	JAT	IC-4	1	B130866	No Prep
2	EPA-200.8	02/02/22 17:20	02/03/22 07:55	KHS	PE-EL2	1	B130830	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-08 | **Client Sample Name:** JPL-GW-Monitoring, EB-1-013122, 1/31/2022 1:45:00PM, Blaine Tech - L. Henderson

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-08 | **Client Sample Name:** JPL-GW-Monitoring, EB-1-013122, 1/31/2022 1:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2201950-08 | **Client Sample Name:** JPL-GW-Monitoring, EB-1-013122, 1/31/2022 1:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 21:56	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2201950-08 | **Client Sample Name:** JPL-GW-Monitoring, EB-1-013122, 1/31/2022 1:45:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 21:56	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2201950-08 | **Client Sample Name:** JPL-GW-Monitoring, EB-1-013122, 1/31/2022 1:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000040**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 14:36	02/03/22 13:04	JAT	IC-4	1	B130866	No Prep
2	EPA-200.8	02/02/22 17:20	02/03/22 07:57	KHS	PE-EL2	1	B130830	EPA 200.2

DCN = Data Continuation Number

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
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: B130891						
Benzene	B130891-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B130891-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B130891-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B130891-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B130891-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B130891-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B130891-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B130891-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B130891-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B130891-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B130891-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B130891-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B130891-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B130891-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B130891-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B130891-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B130891-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B130891-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B130891-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B130891-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B130891-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B130891-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B130891-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B130891-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B130891-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B130891-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B130891-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B130891-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B130891-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B130891-BLK1	ND	ug/L	0.50	0.14	

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
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: B130891						
trans-1,3-Dichloropropene	B130891-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B130891-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B130891-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B130891-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B130891-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B130891-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B130891-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B130891-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B130891-BLK1	ND	ug/L	0.50	0.12	
Styrene	B130891-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B130891-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B130891-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B130891-BLK1	ND	ug/L	0.50	0.23	
Toluene	B130891-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B130891-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B130891-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B130891-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B130891-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B130891-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B130891-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B130891-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B130891-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B130891-BLK1	ND	ug/L	0.50	0.18	
Acetone	B130891-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B130891-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B130891-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B130891-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B130891-BLK1	ND	ug/L	2.0	2.0	
Carbon disulfide	B130891-BLK1	ND	ug/L	0.50	0.48	
trans-1,4-Dichloro-2-butene	B130891-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B130891-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B130891-BLK1	ND	ug/L	4.0	1.3	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
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: B130891						
Ethyl t-butyl ether	B130891-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B130891-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B130891-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B130891-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B130891-BLK1	ND	ug/L	5.0	3.3	
Methyl iodide	B130891-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B130891-BLK1	ND	ug/L	5.0	2.4	
Methyl methacrylate	B130891-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B130891-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B130891-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B130891-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B130891-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B130891-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	**B130891-BLK1**	**96.6**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B130891-BLK1**	**99.7**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B130891-BLK1**	**97.4**	%	**80 - 120 (LCL - UCL)**		

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
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: B130891										
Benzene	B130891-BS1	LCS	23.970	25.000	ug/L	95.9		70 - 130		
Bromodichloromethane	B130891-BS1	LCS	23.980	25.000	ug/L	95.9		70 - 130		
Chlorobenzene	B130891-BS1	LCS	22.920	25.000	ug/L	91.7		70 - 130		
Chloroethane	B130891-BS1	LCS	24.390	25.000	ug/L	97.6		70 - 130		
1,4-Dichlorobenzene	B130891-BS1	LCS	22.780	25.000	ug/L	91.1		70 - 130		
1,1-Dichloroethane	B130891-BS1	LCS	23.950	25.000	ug/L	95.8		70 - 130		
1,1-Dichloroethene	B130891-BS1	LCS	25.040	25.000	ug/L	100		70 - 130		
Toluene	B130891-BS1	LCS	23.780	25.000	ug/L	95.1		70 - 130		
Trichloroethene	B130891-BS1	LCS	23.730	25.000	ug/L	94.9		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B130891-BS1	LCS	9.8200	10.000	ug/L	98.2		75 - 125		
Toluene-d8 (Surrogate)	B130891-BS1	LCS	10.150	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	B130891-BS1	LCS	10.140	10.000	ug/L	101		80 - 120		

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
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: B130891	Used client sample: N										
Benzene	MS	2202145-05	ND	23.650	25.000	ug/L		94.6		70 - 130	
	MSD	2202145-05	ND	23.770	25.000	ug/L	0.5	95.1	20	70 - 130	
Bromodichloromethane	MS	2202145-05	ND	23.870	25.000	ug/L		95.5		70 - 130	
	MSD	2202145-05	ND	23.380	25.000	ug/L	2.1	93.5	20	70 - 130	
Chlorobenzene	MS	2202145-05	ND	22.590	25.000	ug/L		90.4		70 - 130	
	MSD	2202145-05	ND	22.770	25.000	ug/L	0.8	91.1	20	70 - 130	
Chloroethane	MS	2202145-05	ND	24.060	25.000	ug/L		96.2		70 - 130	
	MSD	2202145-05	ND	23.320	25.000	ug/L	3.1	93.3	20	70 - 130	
1,4-Dichlorobenzene	MS	2202145-05	ND	23.580	25.000	ug/L		94.3		70 - 130	
	MSD	2202145-05	ND	22.930	25.000	ug/L	2.8	91.7	20	70 - 130	
1,1-Dichloroethane	MS	2202145-05	ND	23.490	25.000	ug/L		94.0		70 - 130	
	MSD	2202145-05	ND	23.790	25.000	ug/L	1.3	95.2	20	70 - 130	
1,1-Dichloroethene	MS	2202145-05	ND	24.920	25.000	ug/L		99.7		70 - 130	
	MSD	2202145-05	ND	25.080	25.000	ug/L	0.6	100	20	70 - 130	
Toluene	MS	2202145-05	ND	23.520	25.000	ug/L		94.1		70 - 130	
	MSD	2202145-05	ND	23.450	25.000	ug/L	0.3	93.8	20	70 - 130	
Trichloroethene	MS	2202145-05	ND	23.520	25.000	ug/L		94.1		70 - 130	
	MSD	2202145-05	ND	23.520	25.000	ug/L	0	94.1	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2202145-05	ND	9.4600	10.000	ug/L		94.6		75 - 125	
	MSD	2202145-05	ND	9.7300	10.000	ug/L	2.8	97.3		75 - 125	
Toluene-d8 (Surrogate)	MS	2202145-05	ND	9.9800	10.000	ug/L		99.8		80 - 120	
	MSD	2202145-05	ND	9.8600	10.000	ug/L	1.2	98.6		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	2202145-05	ND	10.140	10.000	ug/L		101		80 - 120	
	MSD	2202145-05	ND	9.8400	10.000	ug/L	3.0	98.4		80 - 120	

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
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: B130891						
Chloroacetonitrile	B130891-BLK1	0	ug/L			
1-Chlorobutane	B130891-BLK1	0	ug/L			
1,1-Dichloropropanone	B130891-BLK1	0	ug/L			
Methyl acrylate	B130891-BLK1	0	ug/L			
Nitrobenzene	B130891-BLK1	0	ug/L			
2-Nitropropane	B130891-BLK1	0	ug/L			

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
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: B130830						
Total Recoverable Chromium	B130830-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B130866						
Hexavalent Chromium	B130866-BLK1	ND	mg/L	0.00020	0.000020	

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
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: B130830										
Total Recoverable Chromium	B130830-BS1	LCS	42.498	40.000	ug/L	106		85 - 115		
QC Batch ID: B130866										
Hexavalent Chromium	B130866-BS1	LCS	0.020271	0.020000	mg/L	101		90 - 110		

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
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: B130830	Used client sample: N										
Total Recoverable Chromium	DUP	2200911-02	6.4600	6.4250		ug/L	0.5		20		
	MS	2200911-02	6.4600	46.779	40.000	ug/L		101		70 - 130	
	MSD	2200911-02	6.4600	45.270	40.000	ug/L	3.3	97.0	20	70 - 130	
QC Batch ID: B130866	Used client sample: Y - Description: MW-20-5-013122, 01/31/2022 09:00										
Hexavalent Chromium	DUP	2201950-02	0.00013200	0.00013900		mg/L	5.2		10		J
	MS	2201950-02	0.00013200	0.020118	0.020202	mg/L		98.9		90 - 110	
	MSD	2201950-02	0.00013200	0.020289	0.020202	mg/L	0.8	99.8	10	90 - 110	

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 03-08-2022
EMAX Batch No.: 22B206

Attn: Natalie Serda

Pace Analytical
4100 Atlas Court
Bakersfield CA 93308

Subject: Laboratory Report
Project: 2201950

Enclosed is the Laboratory report for samples received on 02/22/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
2201950-02	B206-01	01/31/22	WATER	PERCHLORATE BY IC
2201950-03	B206-02	01/31/22	WATER	PERCHLORATE BY IC
2201950-04	B206-03	01/31/22	WATER	PERCHLORATE BY IC
2201950-05	B206-04	01/31/22	WATER	PERCHLORATE BY IC
2201950-06	B206-05	01/31/22	WATER	PERCHLORATE BY IC
2201950-07	B206-06	01/31/22	WATER	PERCHLORATE BY IC
2201950-08	B206-07	01/31/22	WATER	PERCHLORATE BY IC

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

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912021-19
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

REPORT ID: 22B206 Page 1 of 60

SUBCONTRACT ORDER

BC Laboratories

2201950

22B206

SENDING LABORATORY:

BC Laboratories
4100 Atlas Ct
Bakersfield, CA 93308
Phone: 661-327-4911
Fax: 661-327-1918
Project Manager: Natalie Serda

RECEIVING LABORATORY:

Emax Laboratory $EMAXA
3051 Fujita Street
Torrance, CA 90505
Phone :(310) 618-8889
Fax: 310-618-0818

EDF
Cooler ID: 000000000
BTST

	Analysis	Due	Expires	Laboratory ID	Comments
1	**Sample ID: 2201950-02**	**Water**	**Sampled:01/31/22 09:00**		**MW-20-5-013122 (level III)**
	i314.0w Perchlorate (ug/L)	02/14/22 17:00	02/28/22 09:00		
	Containers Supplied: PA-PE				
2	**Sample ID: 2201950-03**	**Water**	**Sampled:01/31/22 12:45**		**MW-20-4-013122 (level III)**
	i314.0w Perchlorate (ug/L)	02/14/22 17:00	02/28/22 12:45		
	Containers Supplied:				
3	**Sample ID: 2201950-04**	**Water**	**Sampled:01/31/22 13:30**		**MW-20-3-013122 (level III)**
	i314.0w Perchlorate (ug/L)	02/14/22 17:00	02/28/22 13:30		
	Containers Supplied:				
4	**Sample ID: 2201950-05**	**Water**	**Sampled:01/31/22 11:30**		**MW-20-2-013122 (level III)**
	i314.0w Perchlorate (ug/L)	02/14/22 17:00	02/28/22 11:30		
	Containers Supplied:				
5	**Sample ID: 2201950-06**	**Water**	**Sampled:01/31/22 12:00**		**DUP-1-1Q22 (level III)**
	i314.0w Perchlorate (ug/L)	02/14/22 17:00	02/28/22 12:00		
	Containers Supplied:				

Released By	Date	Received By	Date
	2-21-22		
Released By	Date	Received By	Date
			2/22/22 9:56

Page 1 of 2

Temp 4.9 / 4.4

REPORT ID: 22B206

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SUBCONTRACT ORDER

BC Laboratories

2201950

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 2201950-07	Water	Sampled:01/31/22 14:20		SB-1-013122 (level III)
i314.0w Perchlorate (ug/L)	02/14/22 17:00	02/28/22 14:20		
Containers Supplied:				
Sample ID: 2201950-08	Water	Sampled:01/31/22 13:45		EB-1-013122 (level III)
i314.0w Perchlorate (ug/L)	02/14/22 17:00	02/28/22 13:45		
Containers Supplied:				

Released By	Date	Received By	Date	
2-21-22			2/22/22 9:56	
Released By	Date	Received By	Date	

Page 2 of

Temp 4.9 | 4.4

REPORT ID: 22B206

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SAMPLE RECEIPT FORM 1

Reference: Addendum SM02.11.1
Form: SM02F1

Type of Delivery	Airbill / Tracking Number	ECN 22B206
☐ Fedex ☐ UPS ☑ GSO ☐ Others	470570221223718394 04	Recipient Jhowin Zamora
☐ EMAX Courier ☐ Client Delivery		Date 2/22/22 Time 9:56

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 *correction factor -0.5	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☐ Intact	☐ Damaged		
Packaging	☐ Bubble Pack	☐ Styrofoam	☐ Popcorn	☐ Sufficient	☑ Plastic Bag
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 4.9/4.4 °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 ~~210191066~~ @ 14/4	B - S/N 210271396	C S/N 210271599	D - S/N _____	

Comments: ☐ Temperature is out of range. PM was informed IMMEDIATELY.

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1-7	1-7	D1		R1

☐ 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 label	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 Jhowin Zamora Date 2/22/22 2/22/22

SRF Date 2/22/22

PM EA for RS Date 2/23/22

REPORT ID: 22B206 *EMAX* Laboratories, Inc. 3051 Fujita St., Torrance, CA 90505 Page 4 of 60

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.

REPORT ID: 22B206 Page 5 of 60

LABORATORY REPORT FOR

PACE ANALYTICAL

2202145

METHOD E314.0
PERCHLORATE

SDG#: 22B206

REPORT ID: 22B206 Page 6 of 60

CASE NARRATIVE

Client : PACE ANALYTICAL

Project: 2201950

SDG : 22B206

METHOD E314.0
PERCHLORATE

A total of seven(7) water samples were received on 02/22/22 to be analyzed for Perchlorate in accordance with Method E314.0 and project specific requirements.

Holding Time
Samples were 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 out 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. Perchlorate was not detected in PCB001WB. 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. PCB001WL/PCB001WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) MS was analyzed. Percent recovery for Perchlorate was within MS QC limits in B206-01M. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RESULTS

REPORT ID: 22B206

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METHOD E314.0
PERCHLORATE

Client : PACE ANALYTICAL
Project : 2201950
Batch No. : 228206

Matrix : WATER
Instrument ID : 57

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLKIW	PCB001WB	ND	1	NA	2.00	0.500	1.00	02/22/2219:43	NA	22JB22011	22JB22010	PCB001W	NA	NA
LCSIW	PCB001WL	25.6	1	NA	2.00	0.500	1.00	02/22/2220:27	NA	22JB22013	22JB22010	PCB001W	NA	NA
LCDIW	PCB001WC	25.4	1	NA	2.00	0.500	1.00	02/22/2220:53	NA	22JB22014	22JB22010	PCB001W	NA	NA
2201950-02	B206-01	ND	1	NA	2.00	0.500	1.00	02/22/2221:56	NA	22JB22017	22JB22015	PCB001W	01/31/2209:00	02/22/22
2201950-02DUP	B206-01D	ND	1	NA	2.00	0.500	1.00	02/22/2222:17	NA	22JB22018	22JB22015	PCB001W	01/31/2209:00	02/22/22
2201950-02MS	B206-01M	15.4	1	NA	2.00	0.500	1.00	02/22/2222:38	NA	22JB22019	22JB22015	PCB001W	01/31/2209:00	02/22/22
2201950-03	B206-02	ND	1	NA	2.00	0.500	1.00	02/22/2222:59	NA	22JB22020	22JB22015	PCB001W	01/31/2212:45	02/22/22
2201950-04	B206-03	ND	1	NA	2.00	0.500	1.00	02/22/2223:20	NA	22JB22021	22JB22015	PCB001W	01/31/2213:30	02/22/22
2201950-05	B206-04	ND	1	NA	2.00	0.500	1.00	02/22/2223:41	NA	22JB22022	22JB22015	PCB001W	01/31/2211:30	02/22/22
2201950-06	B206-05	ND	1	NA	2.00	0.500	1.00	02/23/2200:02	NA	22JB22023	22JB22015	PCB001W	01/31/2212:00	02/22/22
2201950-07	B206-06	ND	1	NA	2.00	0.500	1.00	02/23/2200:23	NA	22JB22024	22JB22015	PCB001W	01/31/2214:20	02/22/22
2201950-08	B206-07	ND	1	NA	2.00	0.500	1.00	02/23/2200:44	NA	22JB22025	22JB22015	PCB001W	01/31/2213:45	02/22/22

Note: Detection limits are reported relative to sample result significant figures.

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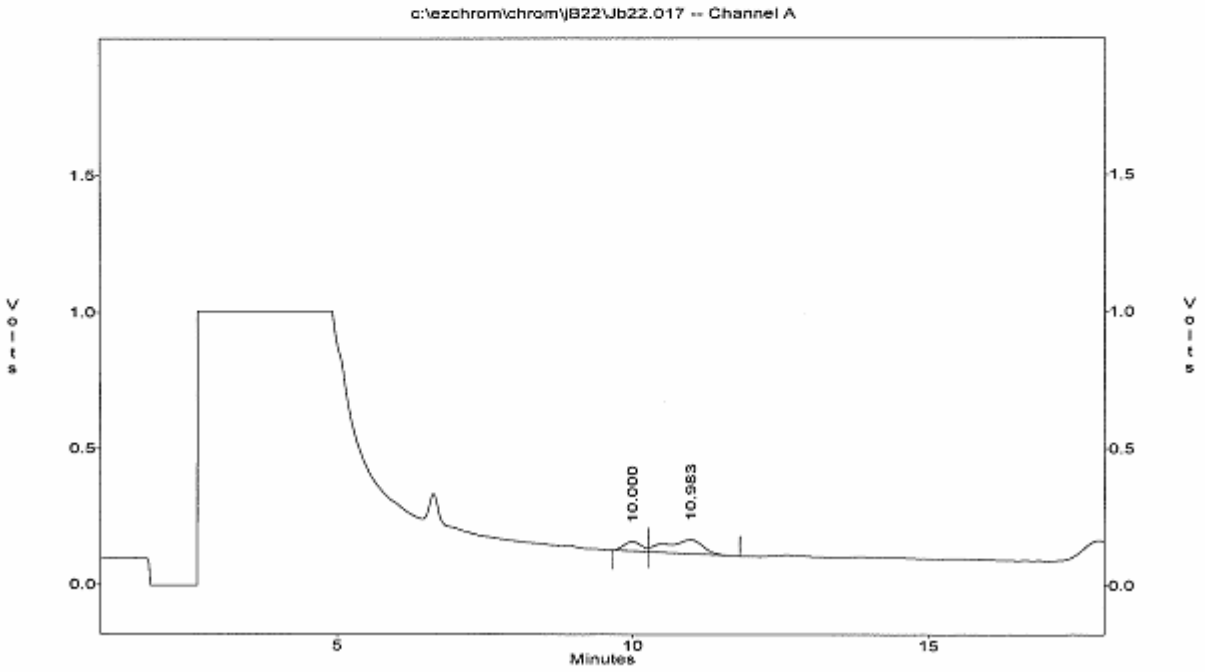
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.017
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B206-01
Acquired : Feb 22, 2022 21:56:14
Printed : Feb 22, 2022 22:17:15
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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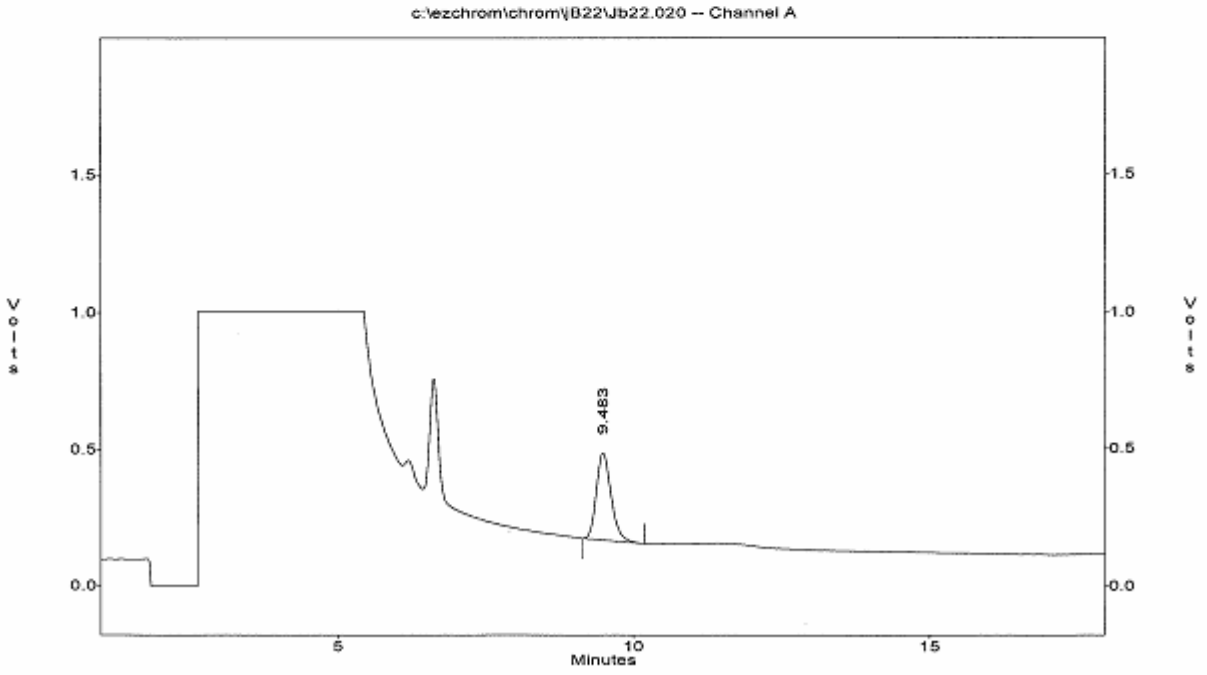
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.020
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B206-02
Acquired : Feb 22, 2022 22:59:19
Printed : Feb 22, 2022 23:20:21
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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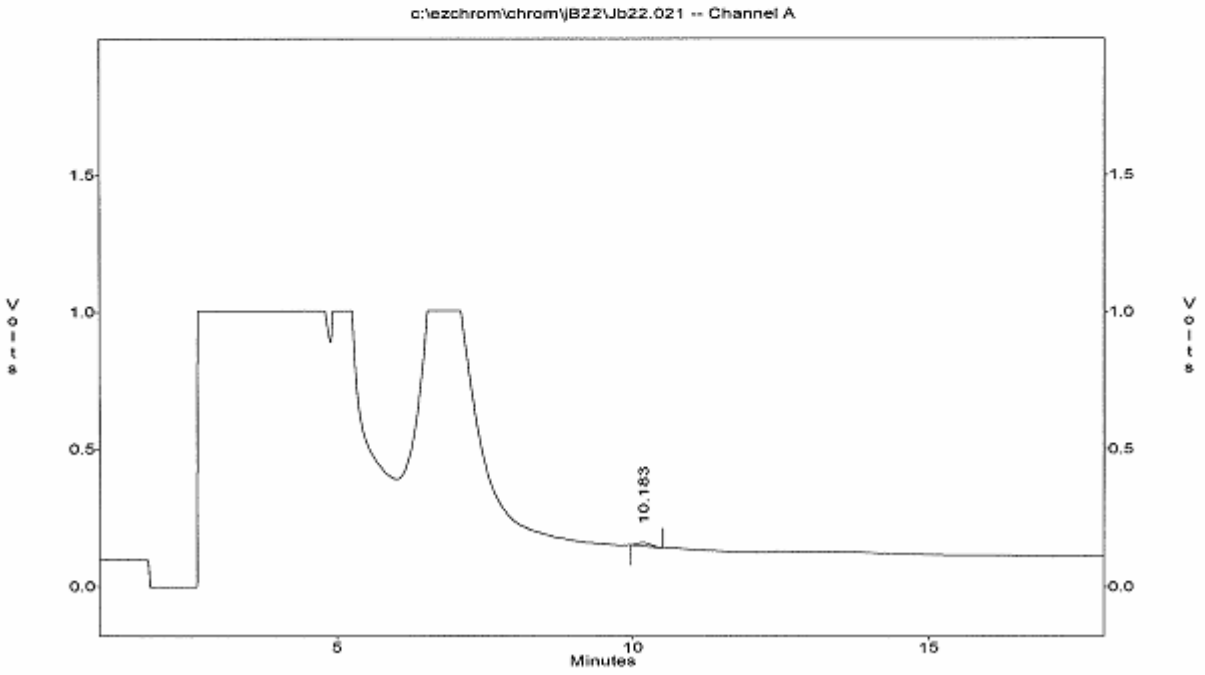
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.021
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B206-03
Acquired : Feb 22, 2022 23:20:21
Printed : Feb 22, 2022 23:41:22
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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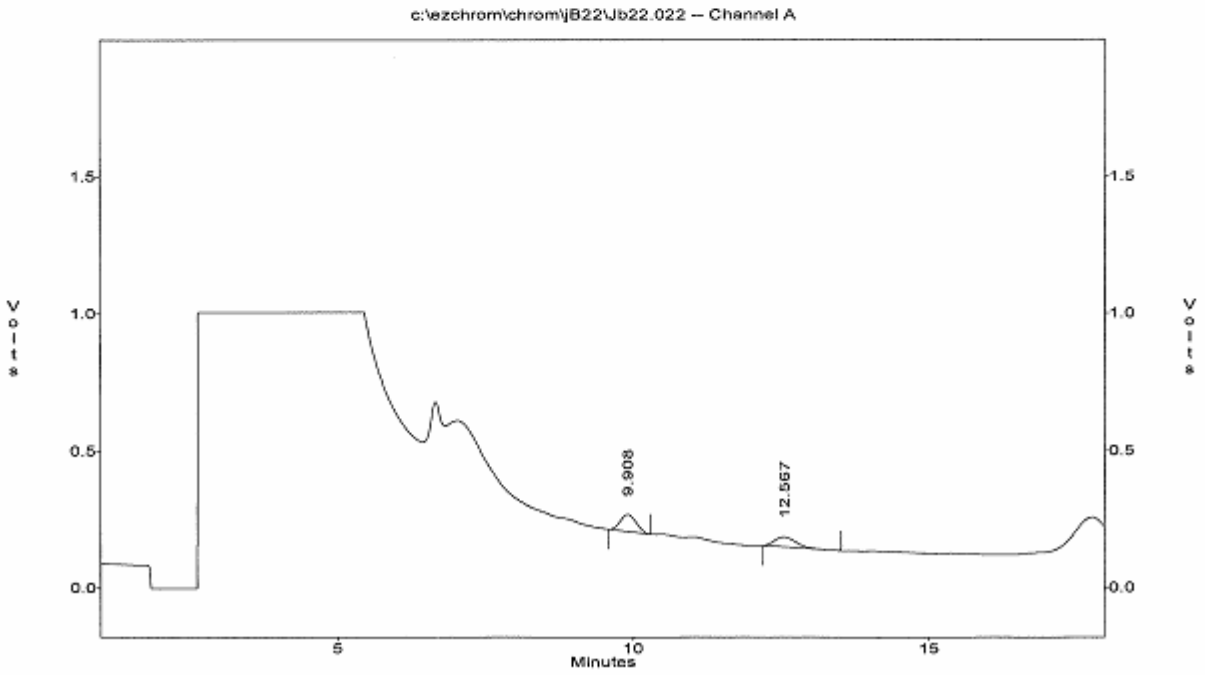
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.022
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B206-04
Acquired : Feb 22, 2022 23:41:23
Printed : Feb 23, 2022 00:02:24
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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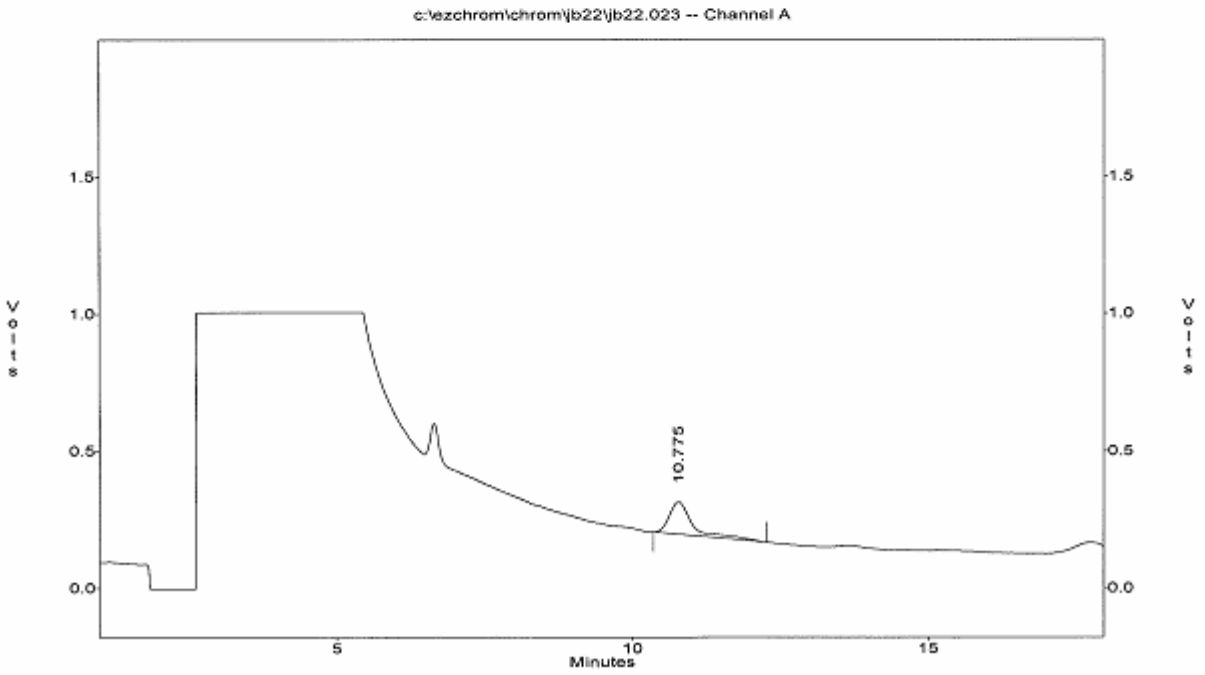
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.023
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : B206-05
Acquired : Feb 23, 2022 00:02:24
Printed : Feb 23, 2022 08:27:30
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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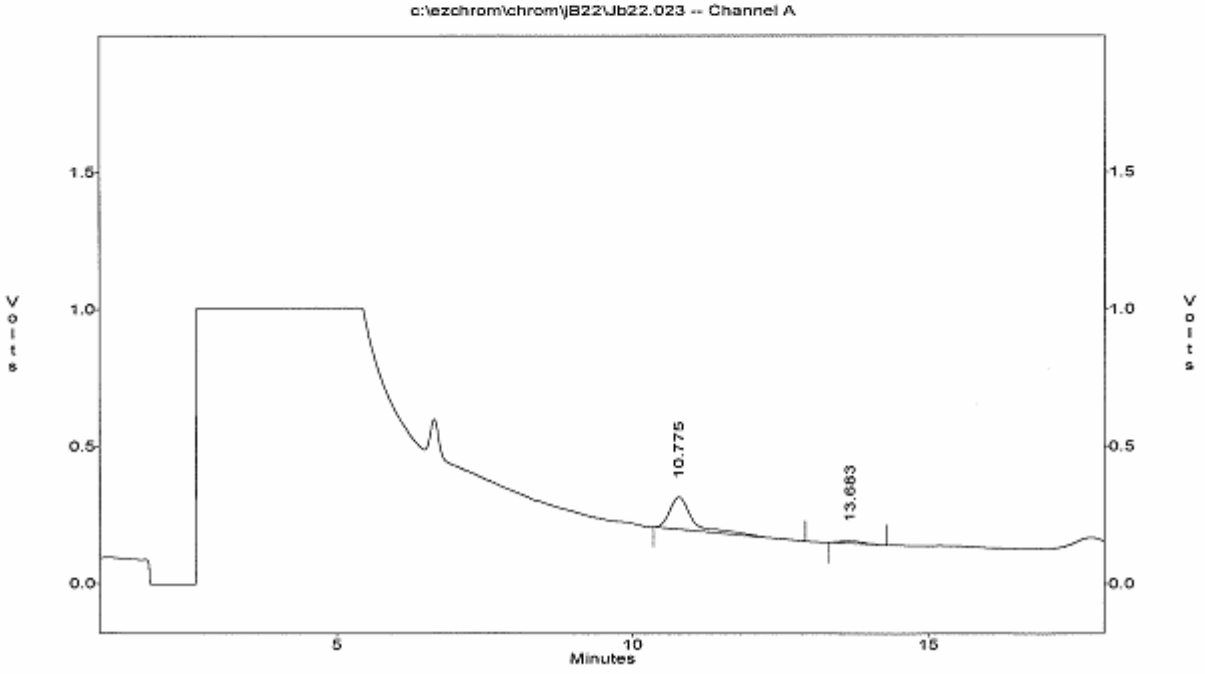
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.023
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B206-05
Acquired : Feb 23, 2022 00:02:24
Printed : Feb 23, 2022 00:23:25
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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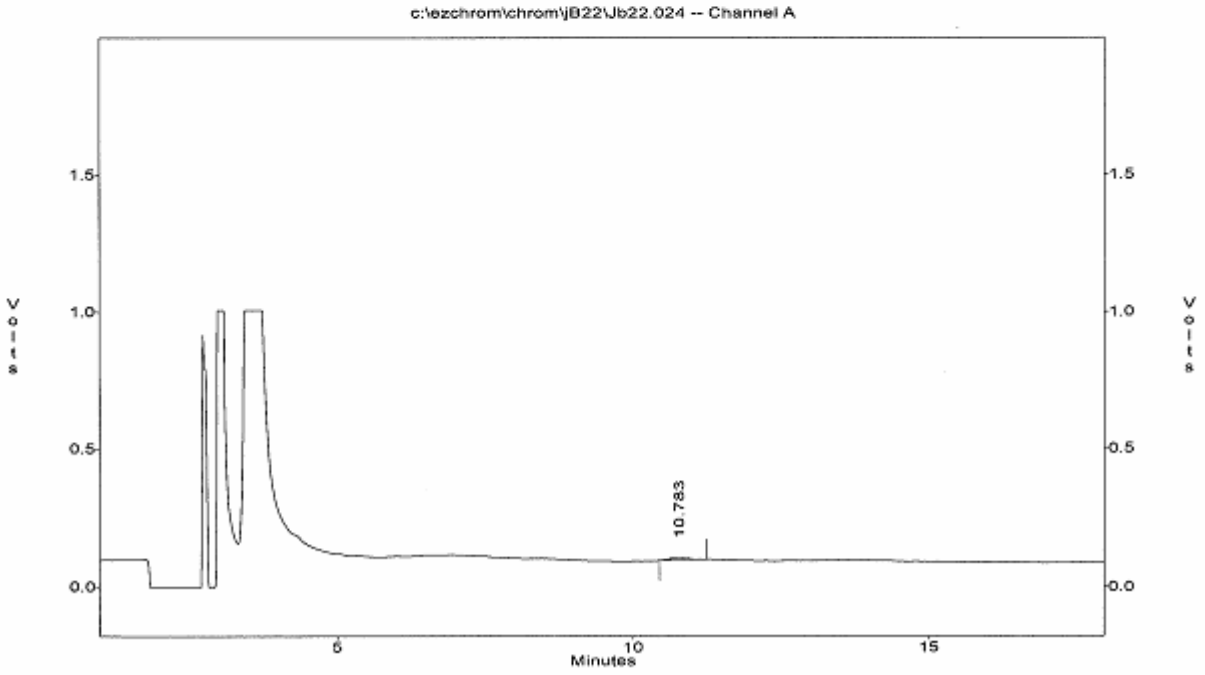
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.024
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B206-06
Acquired : Feb 23, 2022 00:23:25
Printed : Feb 23, 2022 00:44:27
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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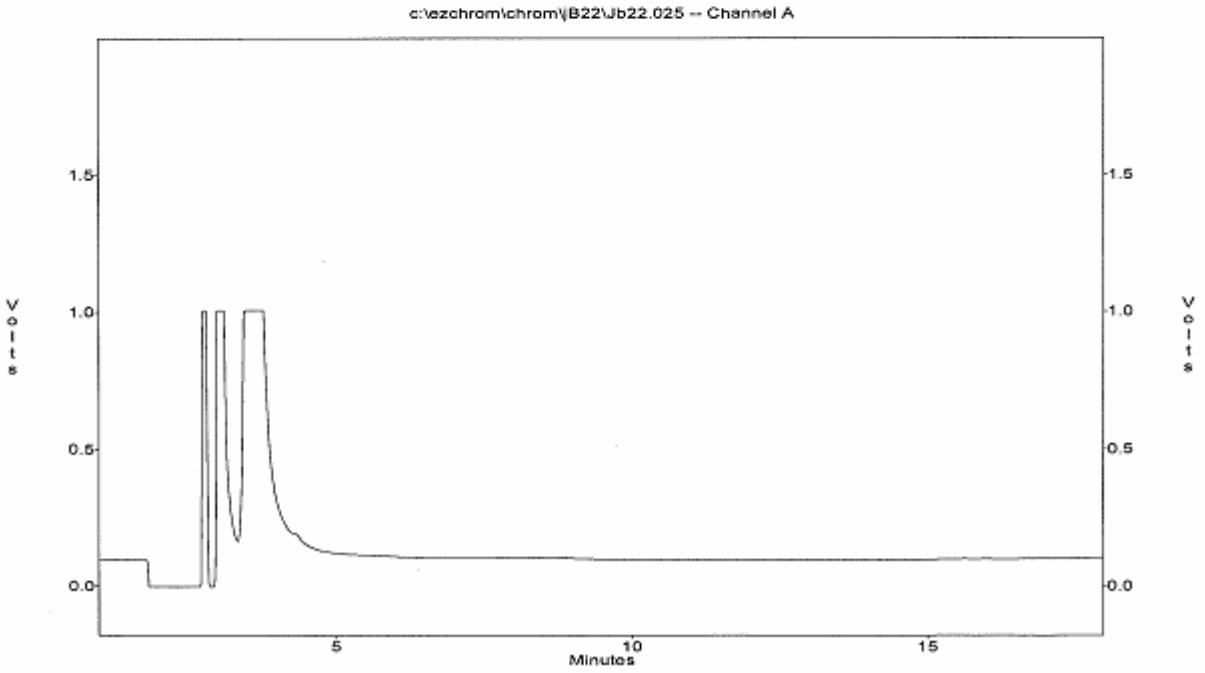
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.025
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B206-07
Acquired : Feb 23, 2022 00:44:27
Printed : Feb 23, 2022 01:05:28
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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QC SUMMARIES

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EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : PACE ANALYTICAL
PROJECT : 2201950
BATCH NO. : 22B206
METHOD : E314.0

MATRIX	: WATER		% MOISTURE: NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: PCB001WB	PCB001WL	PCB001WC
LAB FILE ID	: 22JB22011	22JB22013	22JB22014
DATE PREPARED	: NA	NA	NA
DATE ANALYZED	: 02/22/2219:43	02/22/2220:27	02/22/2220:53
PREP BATCH	: PCB001W	PCB001W	PCB001W
CALIBRATION REF:	22JB22010	22JB22010	22JB22010

ACCESSION:

PARAMETER	MB RESULT (ug/L)	SPIKE AMT (ug/L)	BS RESULT (ug/L)	BS REC (%)	SPIKE AMT (ug/L)	BSD RESULT (ug/L)	BSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Perchlorate	ND	25	25.6	102	25	25.4	102	1	85-115	15

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EMAX QUALITY CONTROL DATA
SAMPLE DUPLICATE ANALYSIS

CLIENT : PACE ANALYTICAL
PROJECT : 2201950
BATCH NO. : 228206
METHOD : E314.0

MATRIX	: WATER	
DILUTION FACTOR	: 1	1
SAMPLE ID	: 2201950-02	2201950-02DUP
LAB SAMPLE ID	: 8206-01	8206-01D
LAB FILE ID	: 22JB22017	22JB22018
DATE PREPARED	: NA	NA
DATE ANALYZED	: 02/22/2221:56	02/22/2222:17
PREP BATCH	: PC8001W	PC8001W
CALIBRATION REF	: 22JB22015	22JB22015

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	DUP RESULT (ug/L)	RPD (%)	MAX RPD (%)
Perchlorate	ND	ND	0	15

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EMAX QUALITY CONTROL DATA
MATRIX SPIKE ANALYSIS

CLIENT : PACE ANALYTICAL
PROJECT : 2201950
BATCH NO. : 228206
METHOD : E314.0

MATRIX	: WATER	% MOISTURE: NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: 2201950-02	2201950-02MS
LAB SAMPLE ID	: B206-01	B206-01M
LAB FILE ID	: 22JB22017	22JB22019
DATE PREPARED	: NA	NA
DATE ANALYZED	: 02/22/2221:56	02/22/2222:38
PREP BATCH	: PCB001W	PCB001W
CALIBRATION REF	: 22JB22015	22JB22015

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	SPIKE AMT (ug/L)	MS RESULT (ug/L)	MS REC (%)	QC LIMIT (%)
Perchlorate	ND	15.00	15.4	103	80-120

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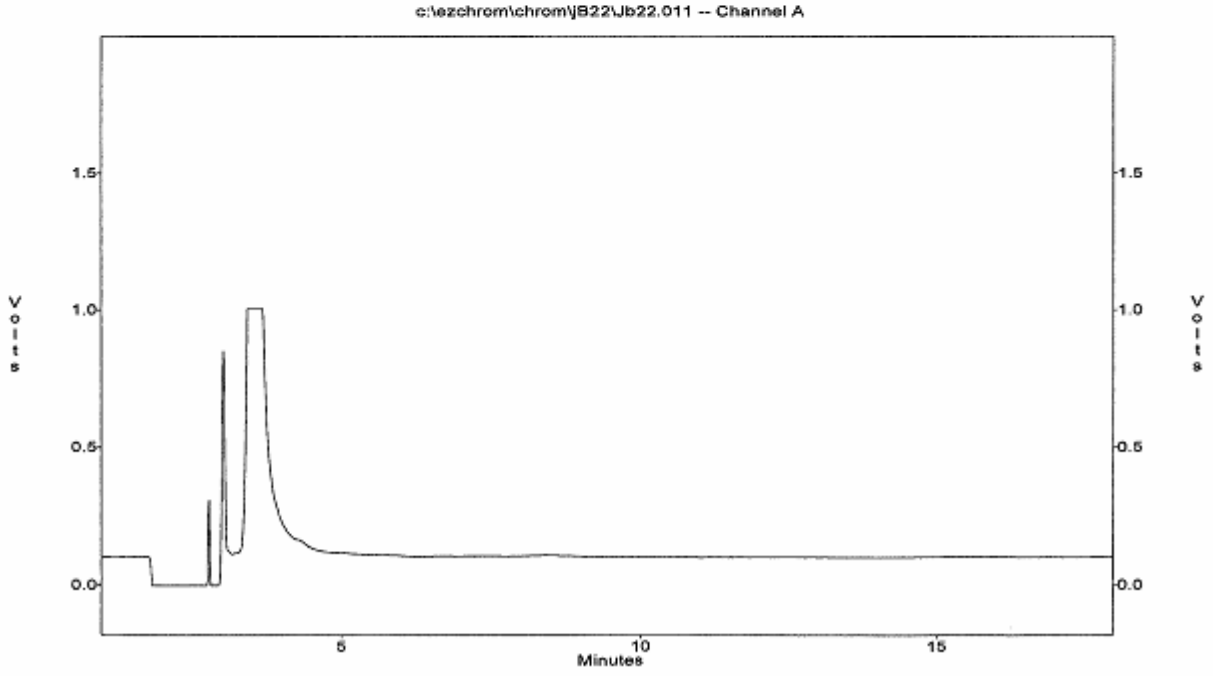
QC DATA

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.011
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : PCB001WB
Acquired : Feb 22, 2022 19:43:38
Printed : Feb 22, 2022 20:04:39
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

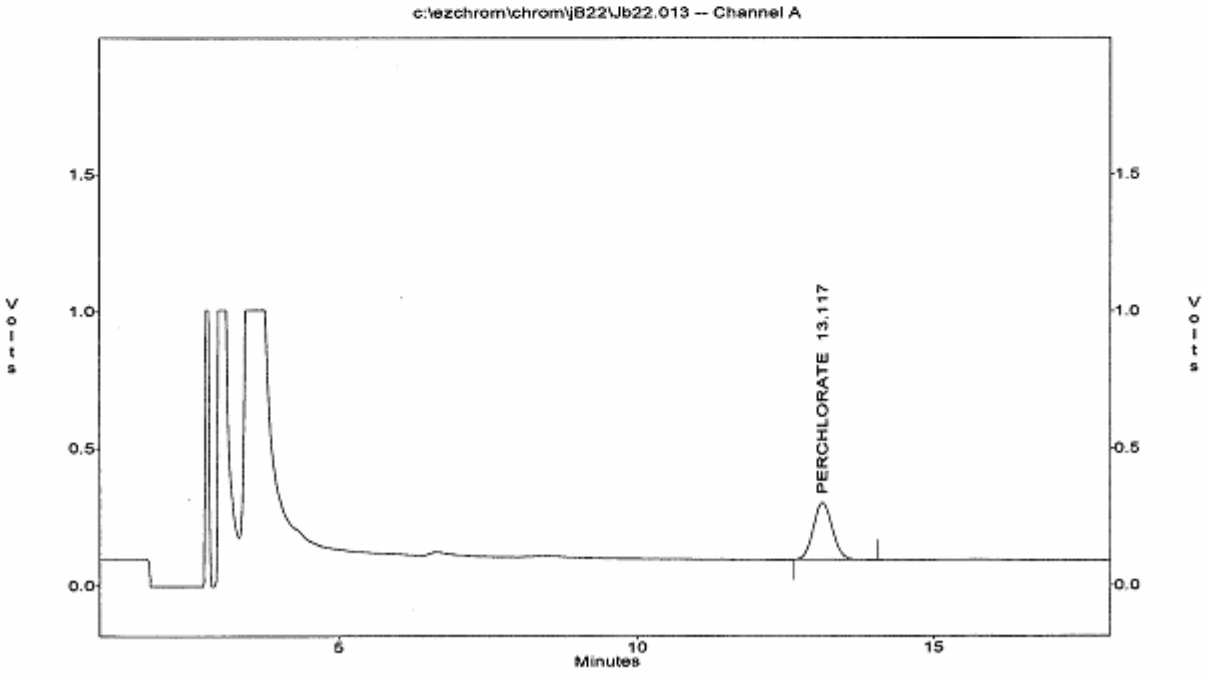
File : c:\ezchrom\chrom\jB22\Jb22.013
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : PCB001WL
Acquired : Feb 22, 2022 20:27:11
Printed : Feb 22, 2022 20:48:12
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.12	4608443	208027	171880.766	25.589

A/H
22.153

$$PD_{A/H} = \frac{|25.468 - 22.153|}{22.153} \times 100 = 15\%$$



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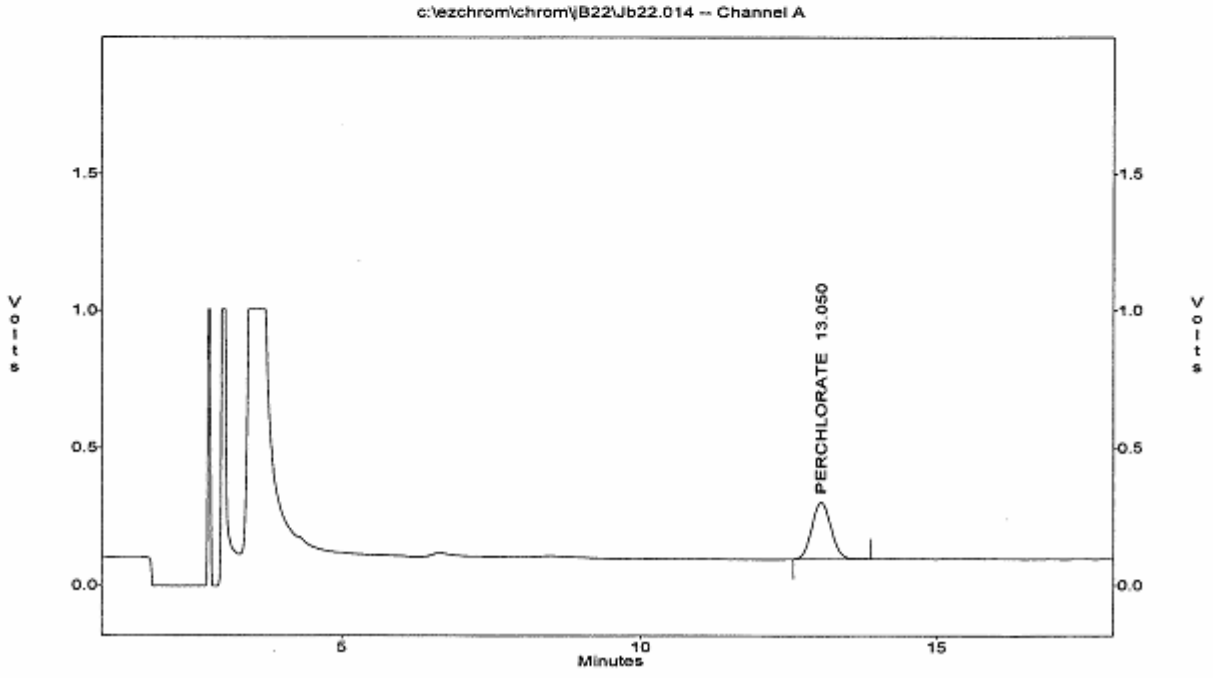
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.014
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : PCB001WC
Acquired : Feb 22, 2022 20:53:09
Printed : Feb 22, 2022 21:14:11
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.05	4567930	207111	171880.766	25.368



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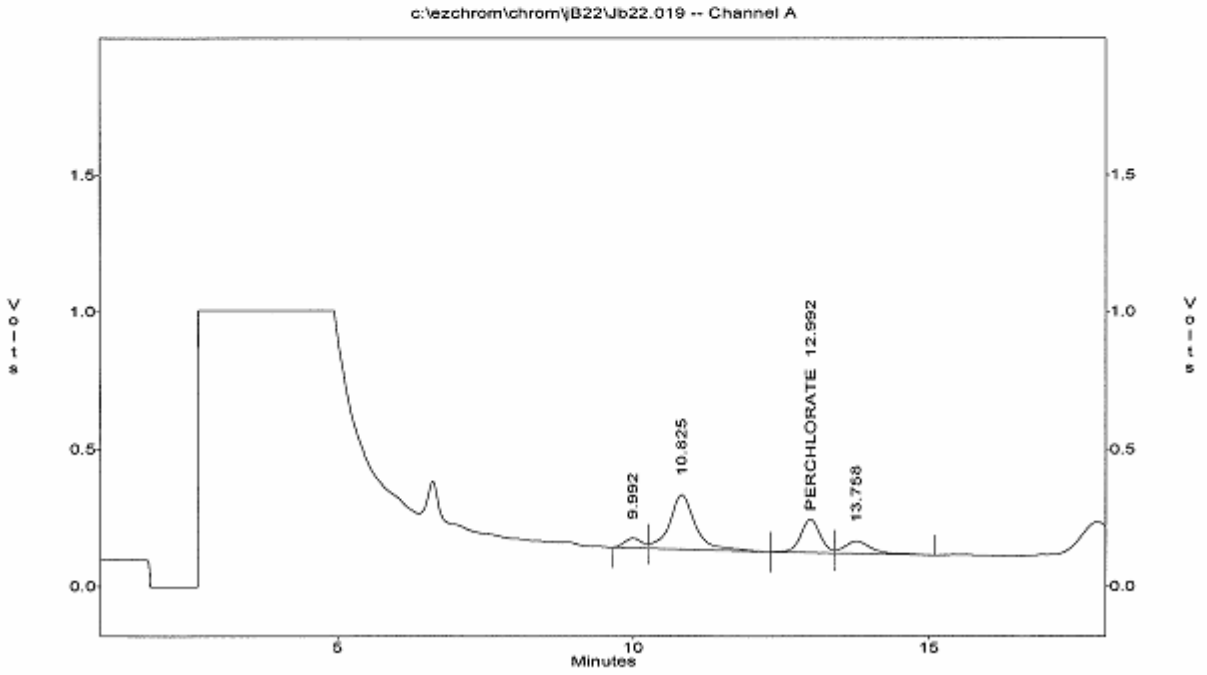
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.019
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B206-01M
Acquired : Feb 22, 2022 22:38:18
Printed : Feb 22, 2022 22:59:19
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
3	PERCHLORATE	12.99	2752291	121506	171880.766	15.429



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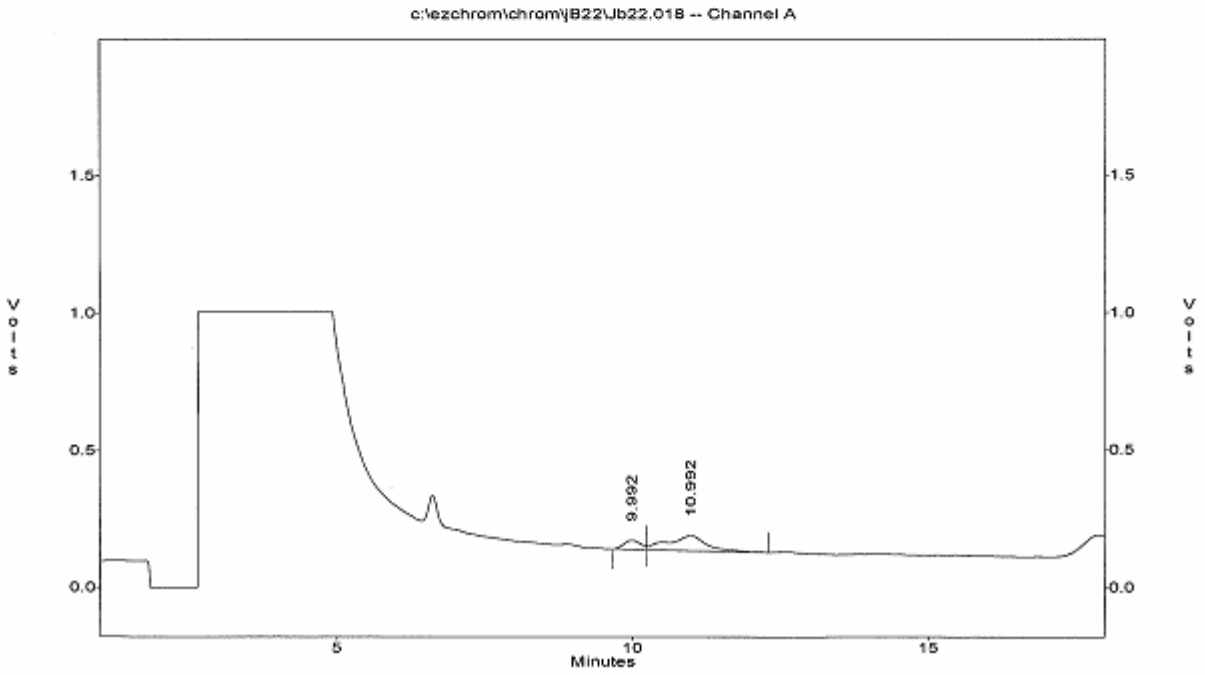
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.018
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B206-01D
Acquired : Feb 22, 2022 22:17:16
Printed : Feb 22, 2022 22:38:17
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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INITIAL CALIBRATION

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IC SEQ FORM (ESD)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
JB22001	IB	P	IC57B22	02/22/2215:17	1
JB22002	SD	P	IC57B22	02/22/2215:39	1
JB22003	S1	P	IC57B22	02/22/2216:02	1
JB22004	S2	P	IC57B22	02/22/2216:24	1
JB22005	S3	P	IC57B22	02/22/2216:46	1
JB22006	S4	P	IC57B22	02/22/2217:07	1
JB22007	S5	P	IC57B22	02/22/2217:29	1
JB22008	ICV	P	IC57B22	02/22/2218:11	1
JB22009	ICB	P	IC57B22	02/22/2218:35	1

IC57B22.MET

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IC RESULT FORM CalVersion: PCHLO314.B22/JB22(2022)

LFID	LSID	SELCOMP	PERCHLORATE	DateTime	Df
JB22001	IB	P	.000	02/22/2215:17	1
JB22002	S0	P	.000	02/22/2215:39	1
JB22003	S1	P	2	02/22/2216:02	1
JB22004	S2	P	4	02/22/2216:24	1
JB22005	S3	P	10	02/22/2216:46	1
JB22006	S4	P	25	02/22/2217:07	1
JB22007	S5	P	30	02/22/2217:29	1
JB22008	ICV	P	101%	02/22/2218:11	1
JB22009	ICB	P	.000	02/22/2218:35	1

IC57B22.MET

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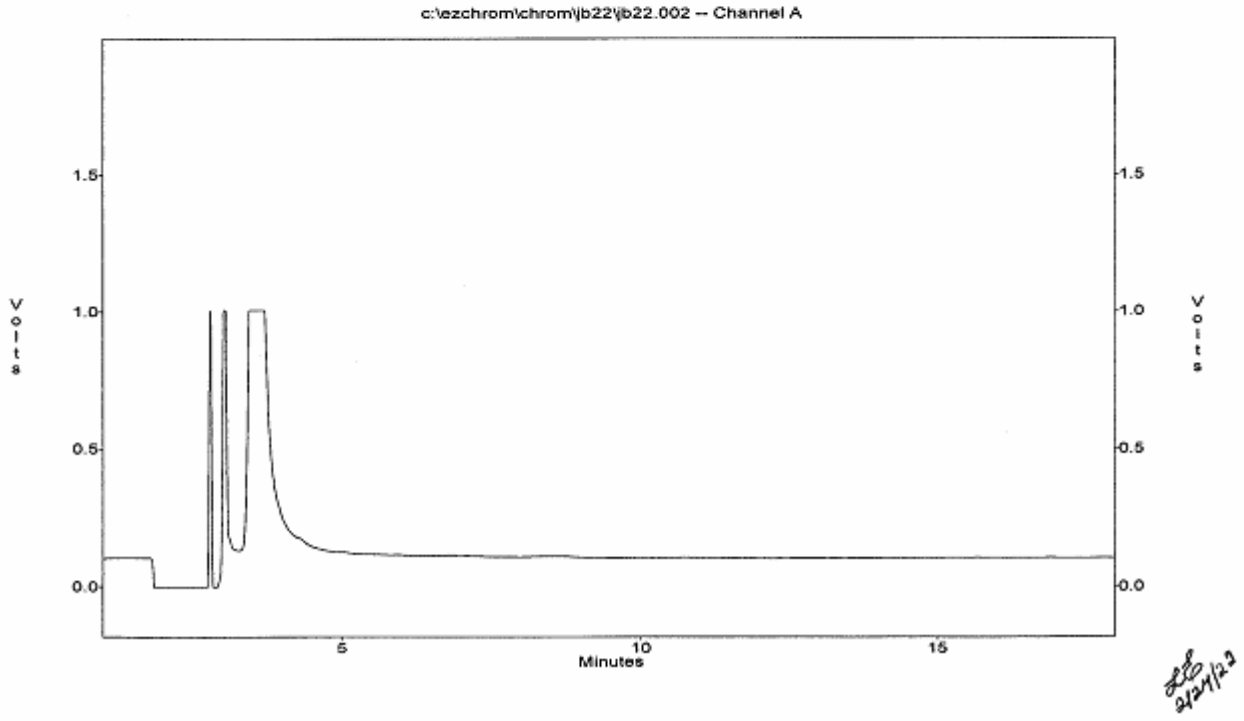
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.002
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S0
Acquired : Feb 22, 2022 15:39:54
Printed : Feb 22, 2022 20:34:23
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



2/24/23

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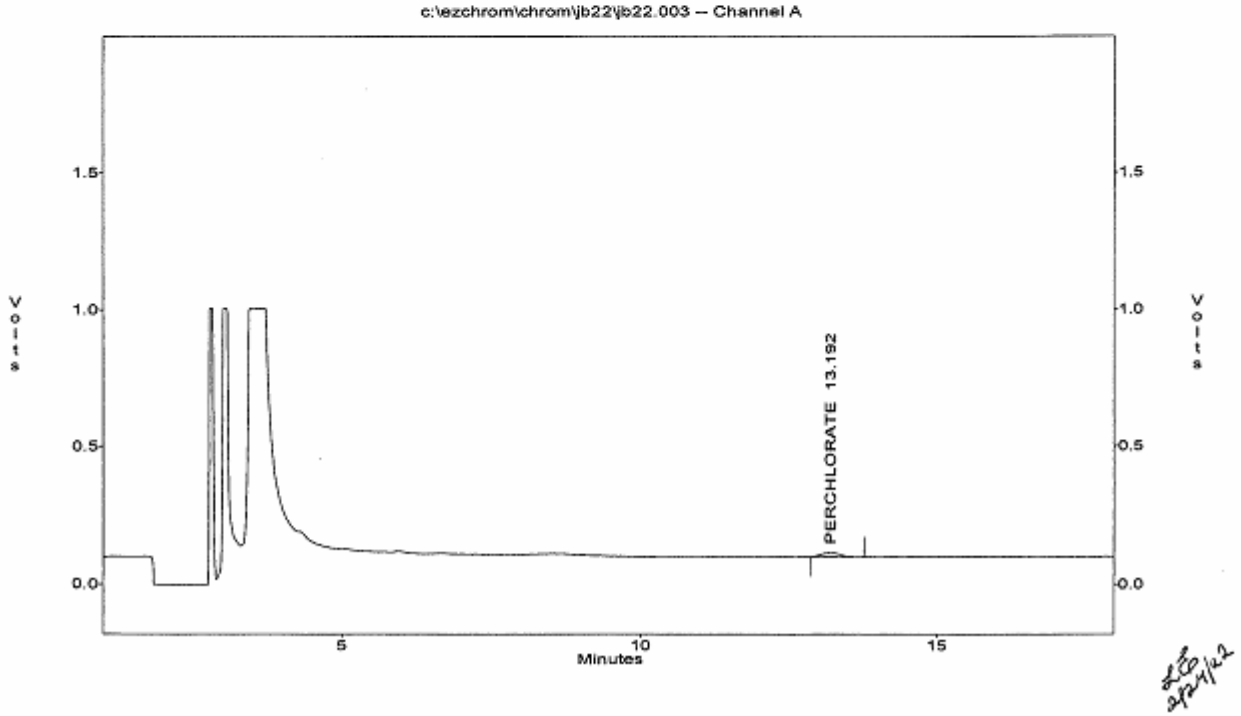
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.003
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S1
Acquired : Feb 22, 2022 16:02:53
Printed : Feb 22, 2022 20:34:41
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.19	314112	14924	171880.766	2.000



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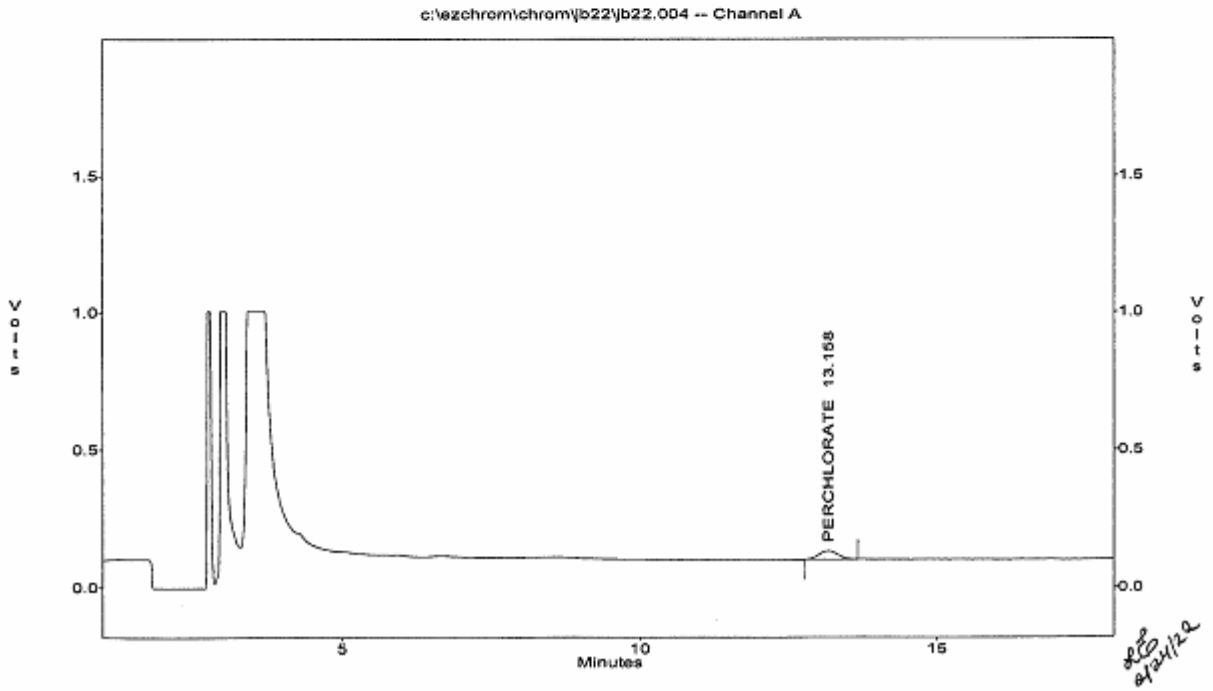
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.004
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S2
Acquired : Feb 22, 2022 16:24:31
Printed : Feb 22, 2022 20:34:55
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.16	676753	30740	171880.766	4.000



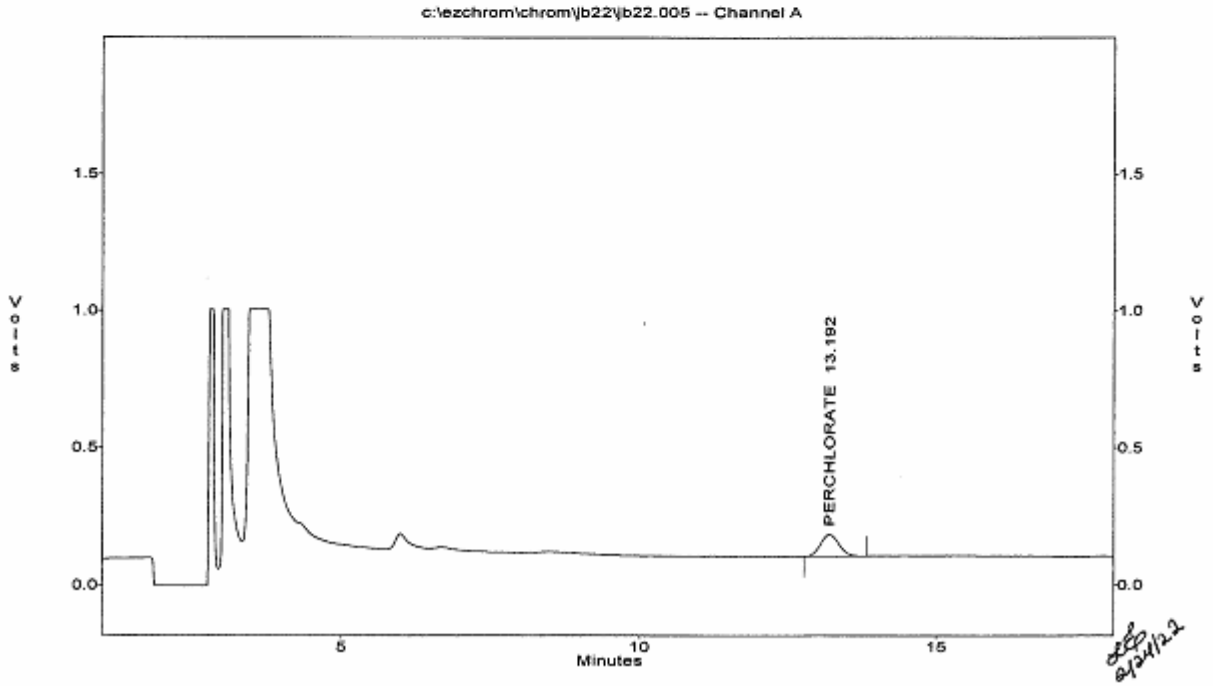
REPORT ID: 22B206

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.005
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S3
Acquired : Feb 22, 2022 16:46:11
Printed : Feb 22, 2022 20:35:13
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.19	1723326	78581	171880.766	10.000



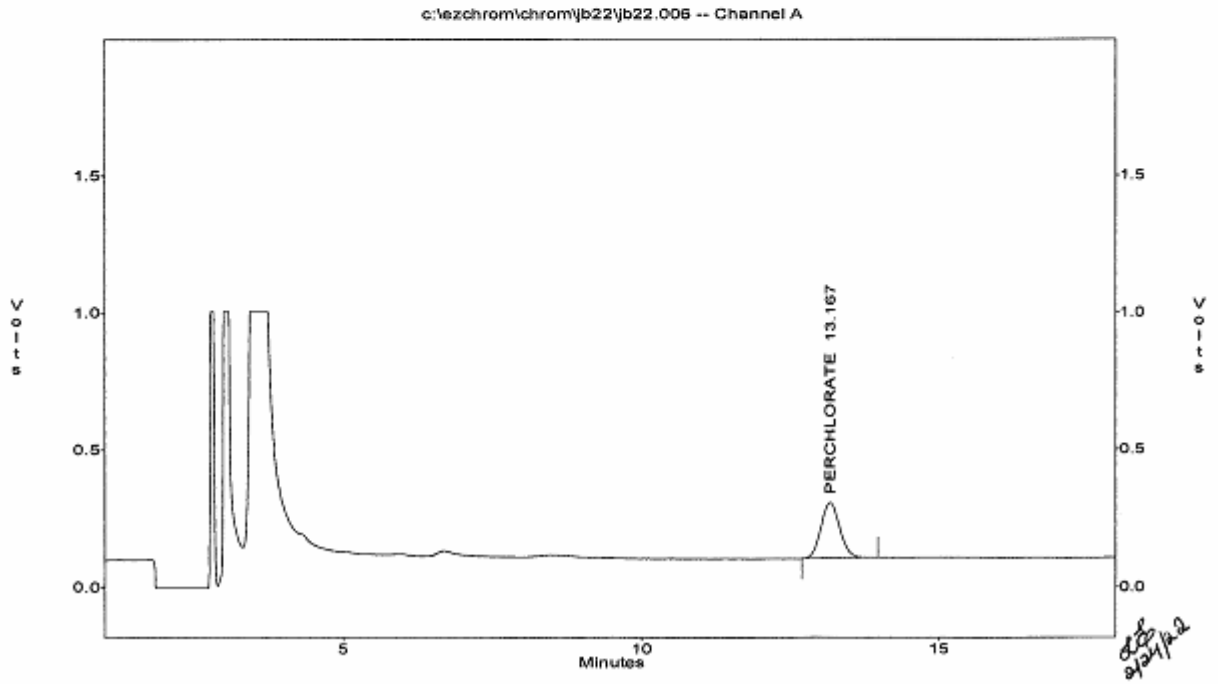
REPORT ID: 22B206

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.006
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S4
Acquired : Feb 22, 2022 17:07:43
Printed : Feb 22, 2022 20:35:27
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.17	4501513	201196	171880.766	25.000



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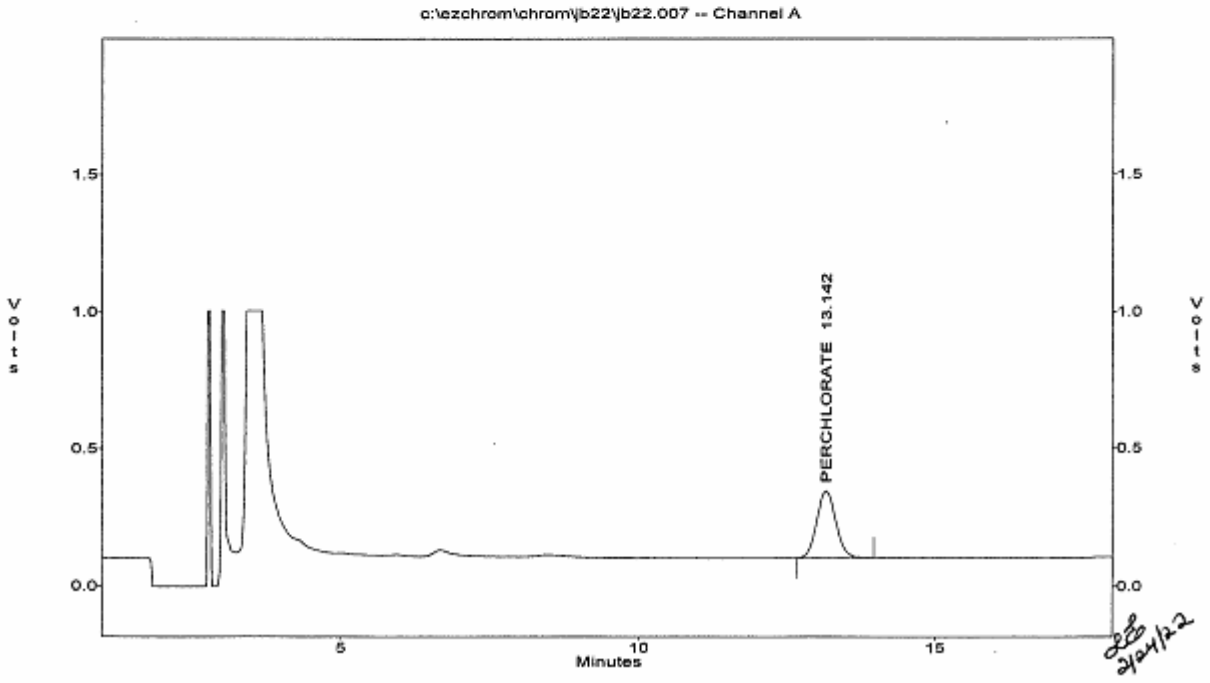
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.007
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S5
Acquired : Feb 22, 2022 17:29:59
Printed : Feb 22, 2022 20:35:39
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.14	5422993	242055	171880.766	30.000



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Method : c:\ezchrom\methods\ic57b22.met
Printed : Feb 22, 2022 20:37:06
Channel : A
Peak : PERCHLORATE

* - Replicate Not Used

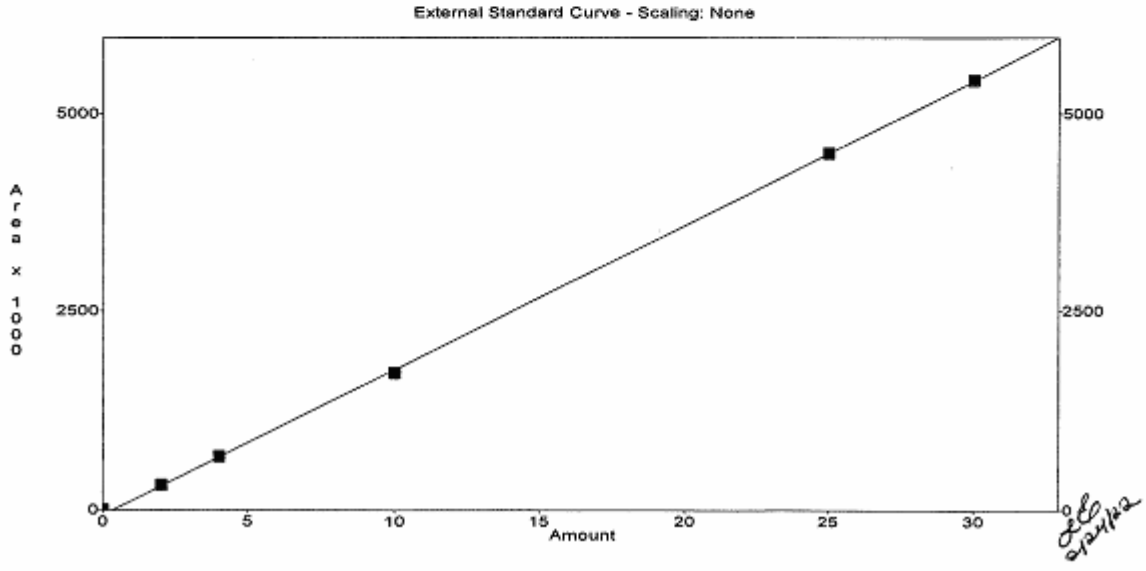
Level	Area	Amount	RF	Rep Area 1	Rep Area 2	Rep Area 3	Rep Area 4	Rep Area 5	Replic STD	Replic %RSD	Old Area
2	314112	2	157056.00	314112							0
3	676753	4	169188.25	676753							0
4	1723326	10	172332.59	1723326							0
5	4501513	25	180060.52	4501513							0
6	5422993	30	180766.44	5422993							0

Calib Flag: Replace

Average RF: 171881
RF StdDev: 9657.78
RF %RSD: 5.619

RF Definition: Area / Amount
Weighting Method: None
Fit Through Zero: No

Linear Fit: Amount = 5.47377e-006 x Area + 0.363742
R^2 = 0.999913



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SECOND SOURCE VERIFICATION

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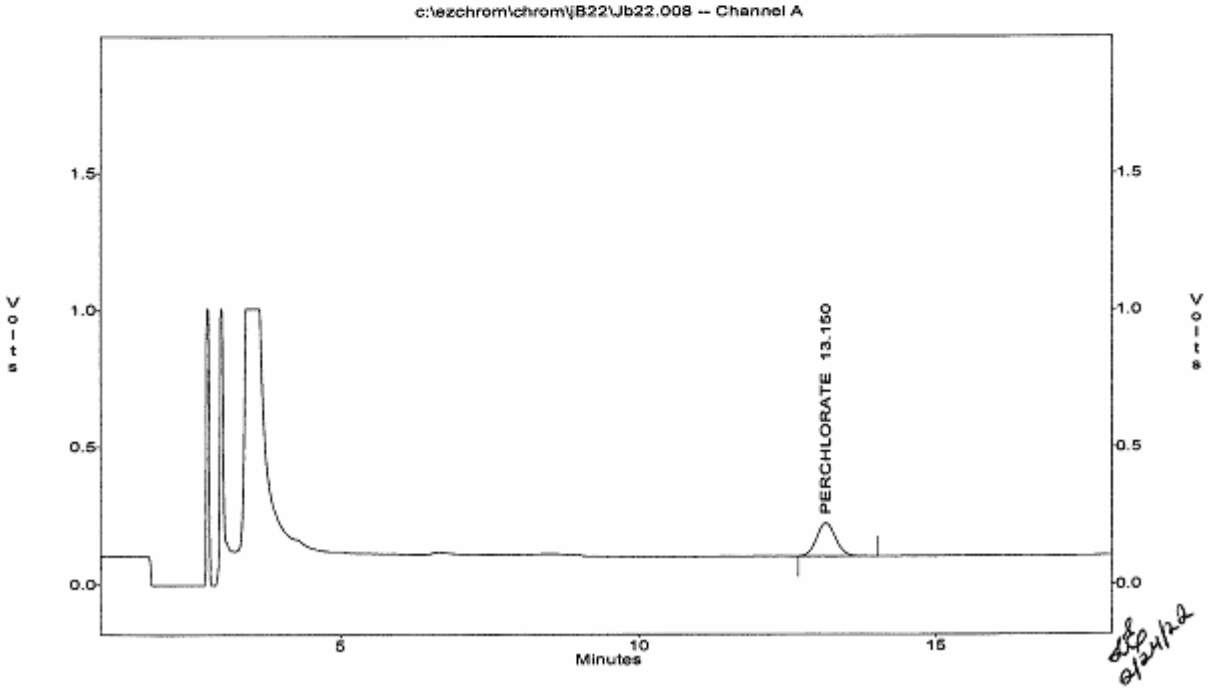
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.008
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : ICV
Acquired : Feb 22, 2022 18:11:46
Printed : Feb 22, 2022 18:32:47
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.15	2710563	121104	171880.766	15.201



REPORT ID: 22B206

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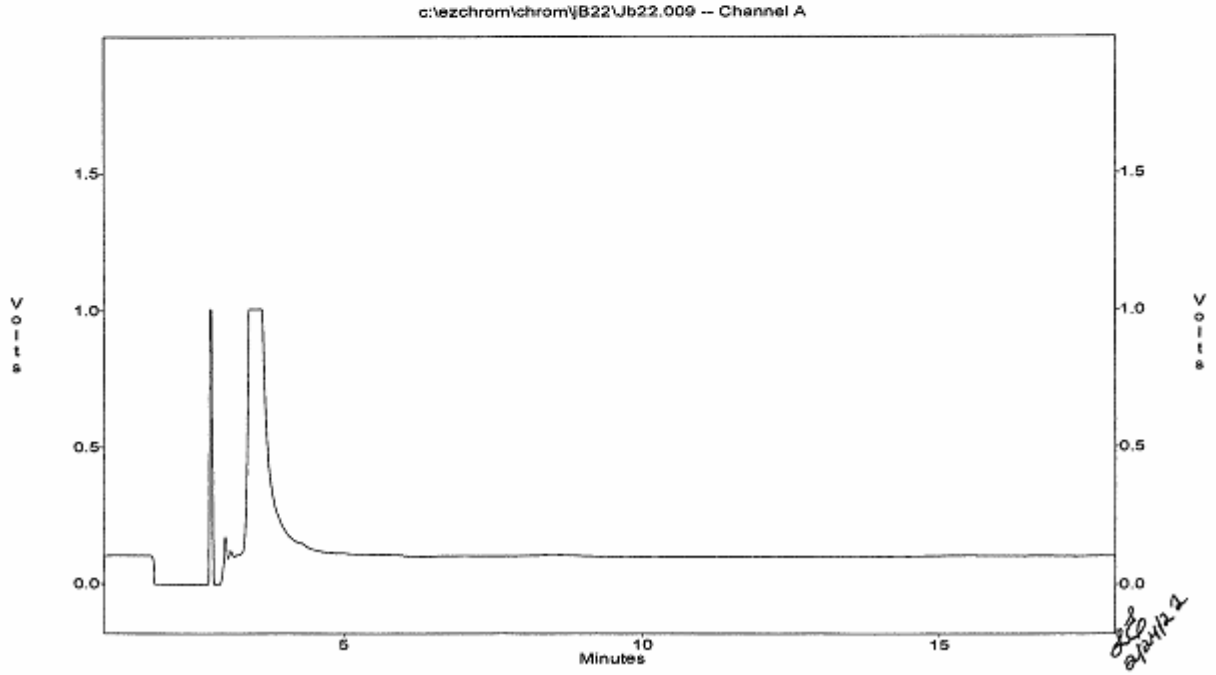
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.009
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : ICB
Acquired : Feb 22, 2022 18:35:45
Printed : Feb 22, 2022 18:56:46
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



REPORT ID: 22B206

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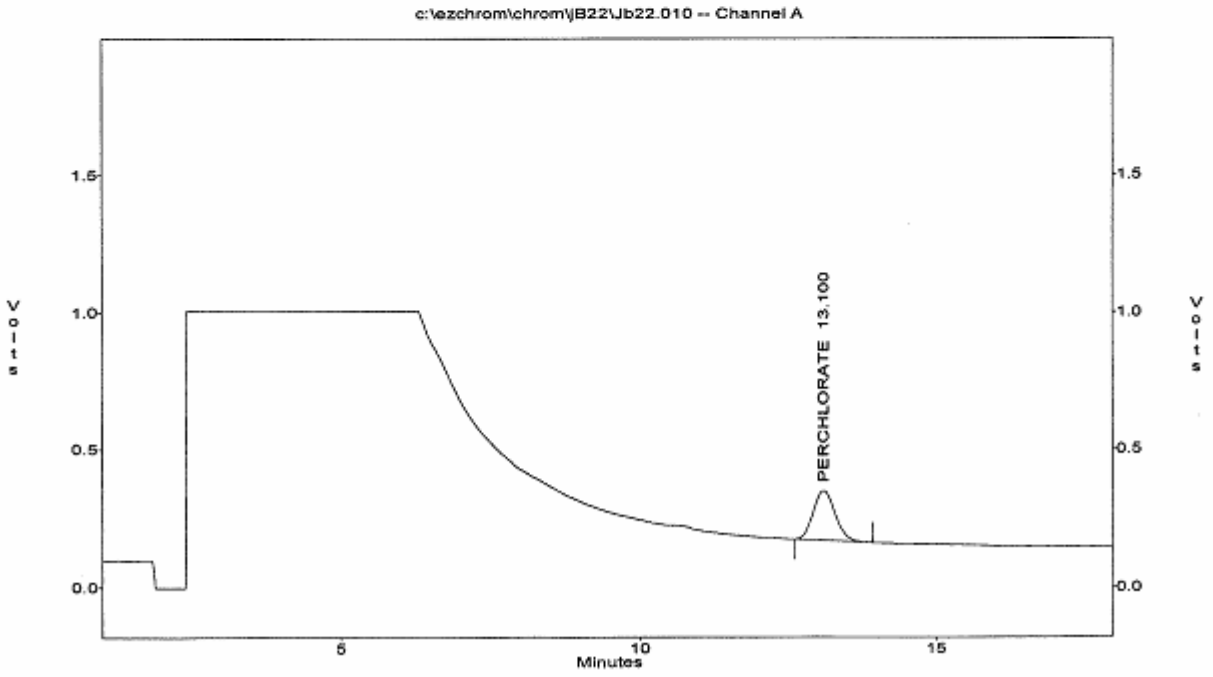
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.010
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : IPCS 300/25
Acquired : Feb 22, 2022 19:21:34
Printed : Feb 22, 2022 19:42:36
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.10	4559226	179019	171880.766	25.320

A/H
25.468



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DAILY CALIBRATIONS

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Continuing Calibration Summary Form

Client : PACE ANALYTICAL
Project : 2201950
SDG : 22B206
Method : METHOD E314.0
Parameter: Perchlorate

LFID	LSID	%Rec	AnalysisDateTime
22JB22015	CCV1-15	100	02/22/2221:14
22JB22026	CCV2-30	106	02/23/2201:05

IPCS Acceptance Criteria: 80-120%
CCV Acceptance Criteria: 85-115%

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IC SEQ FORM (ESD)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
JB22001	IB	P	IC57822	02/22/2215:17	1
JB22002	S0	P	IC57822	02/22/2215:39	1
JB22003	S1	P	IC57822	02/22/2216:02	1
JB22004	S2	P	IC57822	02/22/2216:24	1
JB22005	S3	P	IC57822	02/22/2216:46	1
JB22006	S4	P	IC57822	02/22/2217:07	1
JB22007	S5	P	IC57822	02/22/2217:29	1
JB22008	ICV	P	IC57822	02/22/2218:11	1
JB22009	ICB	P	IC57822	02/22/2218:35	1
JB22010	IPCS	P	IC57822	02/22/2219:21	1
JB22011	PCB001WB	P	IC57822	02/22/2219:43	1
JB22012	MRLB22D1	P	IC57822	02/22/2220:05	1
JB22013	PCB001WL	P	IC57822	02/22/2220:27	1
JB22014	PCB001WC	P	IC57822	02/22/2220:53	1
JB22015	CCV1-15	P	IC57822	02/22/2221:14	1
JB22016	B031-081	P	IC57822	02/22/2221:35	2
JB22017	B206-01	P	IC57822	02/22/2221:56	1
JB22018	B206-01D	P	IC57822	02/22/2222:17	1
JB22019	B206-01M	P	IC57822	02/22/2222:38	1
JB22020	B206-02	P	IC57822	02/22/2222:59	1
JB22021	B206-03	P	IC57822	02/22/2223:20	1
JB22022	B206-04	P	IC57822	02/22/2223:41	1
JB22023	B206-05	P	IC57822	02/23/2200:02	1
JB22024	B206-06	P	IC57822	02/23/2200:23	1
JB22025	B206-07	P	IC57822	02/23/2200:44	1
JB22026	CCV2-30	P	IC57822	02/23/2201:05	1
JB22027	B207-01	P	IC57822	02/23/2201:26	1
JB22028	B207-02	P	IC57822	02/23/2201:47	1
JB22029	B207-03	P	IC57822	02/23/2202:08	1
JB22030	B207-04	P	IC57822	02/23/2202:29	1
JB22031	B207-04D	P	IC57822	02/23/2202:50	1
JB22032	B207-04M	P	IC57822	02/23/2203:11	1
JB22033	B207-05	P	IC57822	02/23/2203:32	1
JB22034	B207-06	P	IC57822	02/23/2203:53	1
JB22035	CCV3-15	P	IC57822	02/23/2204:14	1
JB22036	B207-07	P	IC57822	02/23/2204:35	1
JB22037	B207-08	P	IC57822	02/23/2204:56	1
JB22038	B207-09	P	IC57822	02/23/2205:17	1
JB22039	B207-10	P	IC57822	02/23/2205:38	1
JB22040	B207-11	P	IC57822	02/23/2205:59	1
JB22041	B207-12	P	IC57822	02/23/2206:20	1
JB22042	CCV4-30	P	IC57822	02/23/2206:41	1

IC RESULT FORM CalVersion: PCHLO314.B22/JB22(2022)

LFID	LSID	SELCOMP	PERCHLORATE	DateTime	Df
JB22001	IB	P	.000	02/22/2215:17	1
JB22002	SO	P	.000	02/22/2215:39	1
JB22003	S1	P	2	02/22/2216:02	1
JB22004	S2	P	4	02/22/2216:24	1
JB22005	S3	P	10	02/22/2216:46	1
JB22006	S4	P	25	02/22/2217:07	1
JB22007	S5	P	30	02/22/2217:29	1
JB22008	ICV	P	101%	02/22/2218:11	1
JB22009	ICB	P	.000	02/22/2218:35	1
JB22010	IPCS	P	101%	02/22/2219:21	1
JB22011	PCB001WB	P	.000	02/22/2219:43	1
JB22012	MRLB2201	P	103%	02/22/2220:05	1
JB22013	PCB001WL	P	25.6	02/22/2220:27	1
JB22014	PCB001WC	P	25.4	02/22/2220:53	1
JB22015	CCV1-15	P	100%	02/22/2221:14	1
JB22016	B031-081	P	19.7	02/22/2221:35	2
JB22017	B206-01	P	.000	02/22/2221:56	1
JB22018	B206-01D	P	.000	02/22/2222:17	1
JB22019	B206-01M	P	15.4	02/22/2222:38	1
JB22020	B206-02	P	.000	02/22/2222:59	1
JB22021	B206-03	P	.000	02/22/2223:20	1
JB22022	B206-04	P	.000	02/22/2223:41	1
JB22023	B206-05	P	.000	02/23/2200:02	1
JB22024	B206-06	P	.000	02/23/2200:23	1
JB22025	B206-07	P	.000	02/23/2200:44	1
JB22026	CCV2-30	P	106%	02/23/2201:05	1
JB22027	B207-01	P	.000	02/23/2201:26	1
JB22028	B207-02	P	9.51	02/23/2201:47	1
JB22029	B207-03	P	11.4	02/23/2202:08	1
JB22030	B207-04	P	13.4	02/23/2202:29	1
JB22031	B207-04D	P	13.6	02/23/2202:50	1
JB22032	B207-04M	P	30	02/23/2203:11	1
JB22033	B207-05	P	8.3	02/23/2203:32	1
JB22034	B207-06	P	.000	02/23/2203:53	1
JB22035	CCV3-15	P	103%	02/23/2204:14	1
JB22036	B207-07	P	3.23	02/23/2204:35	1
JB22037	B207-08	P	3.48	02/23/2204:56	1
JB22038	B207-09	P	4.55	02/23/2205:17	1
JB22039	B207-10	P	4.32	02/23/2205:38	1
JB22040	B207-11	P	3.38	02/23/2205:59	1
JB22041	B207-12	P	.000	02/23/2206:20	1
JB22042	CCV4-30	P	105%	02/23/2206:41	1

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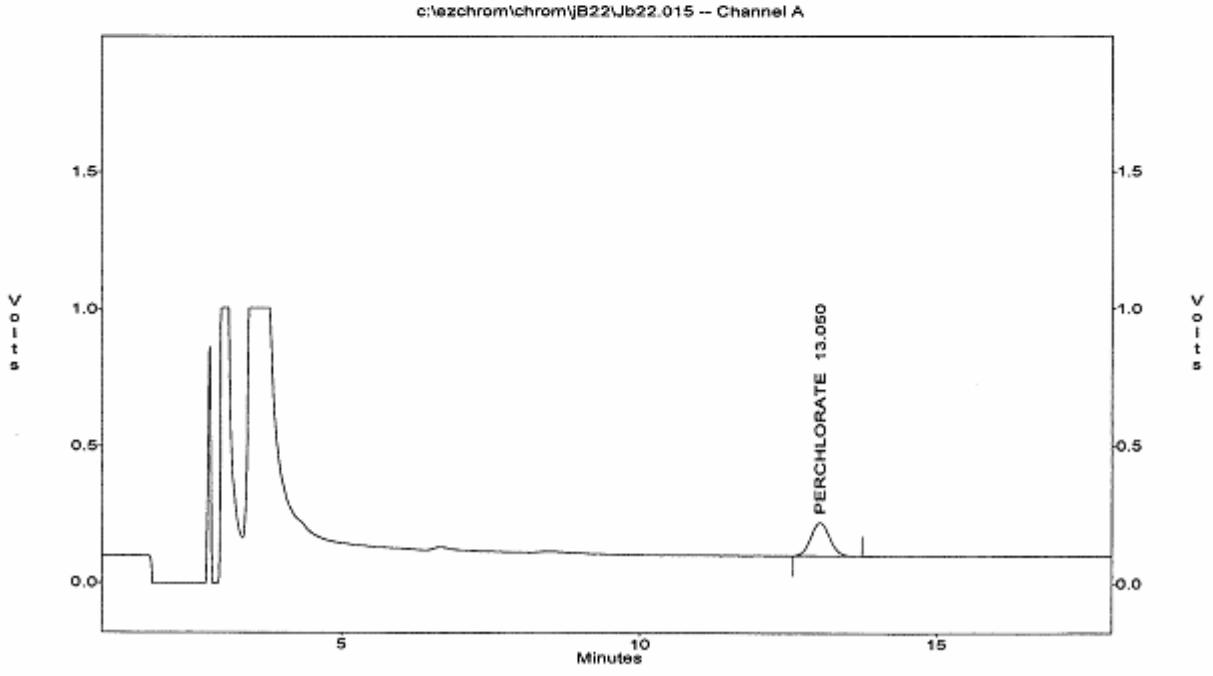
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.015
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : CCV1-15
Acquired : Feb 22, 2022 21:14:11
Printed : Feb 22, 2022 21:35:12
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.05	2676628	121476	171880.766	15.015



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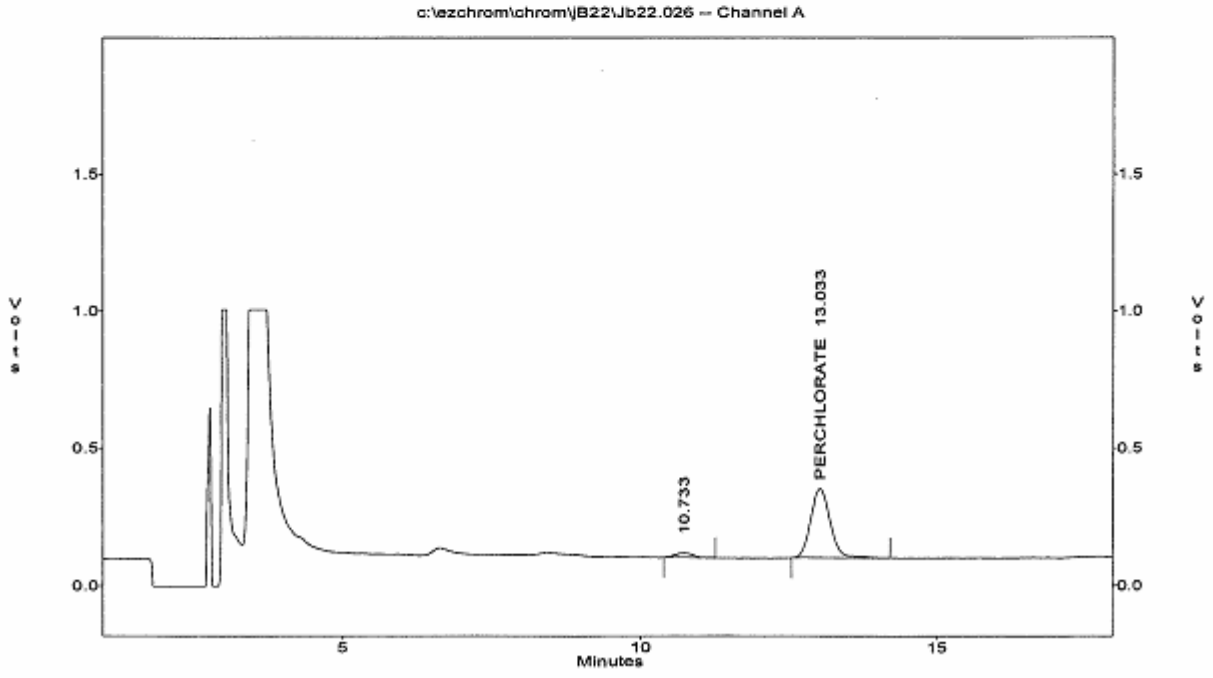
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.026
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : CCV2-30
Acquired : Feb 23, 2022 01:05:29
Printed : Feb 23, 2022 01:26:30
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
2	PERCHLORATE	13.03	5746816	252660	171880.766	31.820



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ANALYTICAL LOG(S)

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

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Note: For samples and relavent QCs/Standards analyzed, refer to attached analytical sequence.

Eluent: NaOH (5.54 g) → 2 L Reagent Water SWR1-02-18-04

Reagent Water ID #: SWIR-011-06-08

Guard II	ID	NA
Ba		✓
Ag		✓
H		✓

Conductivity Meter Calibration

Conductivity Meter ID: DH

Standard ID	TV (µS/cm)	Reading (µS/cm)
SWIA-03-04-04	1000	1,000
SWIA-03-04-01	100,032	100,000
CMC Reading (Acceptance criteria: ± 30)		
SWIA-03-04-07	1410	1412

Temperature: 25 °C Thermometer ID: 181179499

Comments:

Linear Range (ppb): S_0 — 0
S_1 — 2.0
S_2 — 4.0
S_3 — 10.0
S_4 — 25.0
S_5 — 30.0
ICV — 15.0

PCB001W: B206; B207; B031

MS: used 0.15mL of SW4B-003-05-11 to a final volume of 10mL ⇨ 15 ppb

Column: Dionex Ion Pac AS16 (4x250mm) #210505287
Guard Column: Dionex Ion Pac AG16 (4x50mm) #210308037
Flow: 1.50 mL/min Sample Loop: 1.0mL
Suppressor: Dionex AERS 500 (4mm) #178111035

	Snapseal container
0.45 µm filter lot #: 21089013	4 oz; lot #;2106023-1326-1W
0.2 µm filter lot #:	1.5 oz; lot #;24821009

Book #:	A57-038
Instrument No.:	57
CMC Instrument No.:	29
Pipette ID:	SW9A-04-17
	A42762405
	SW9A-04-052
Balance ID:	10601202
Analytical Sequence:	JB22
Method File:	IC57B22
Analytical Batch:	PCB001W

SOP #	Rev. #
☐ EMAX-300M	4
☑ EMAX-314.0	5
☐ EMAX-	

STANDARDS ID		
ICAL	SW4B-003-06-01	
ICV	SW4B-003-06-02	
CCV-15	SW4B-003-06-03	
CCV-30		-06-04
LCS		-06-07
IPC		-06-06
MRL		-06-05
MS	↓	-05-11

MCT Ref. MCT H 2021

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZ-CHROM	
☐	

Analyzed By: JC

Date: 2/22/22

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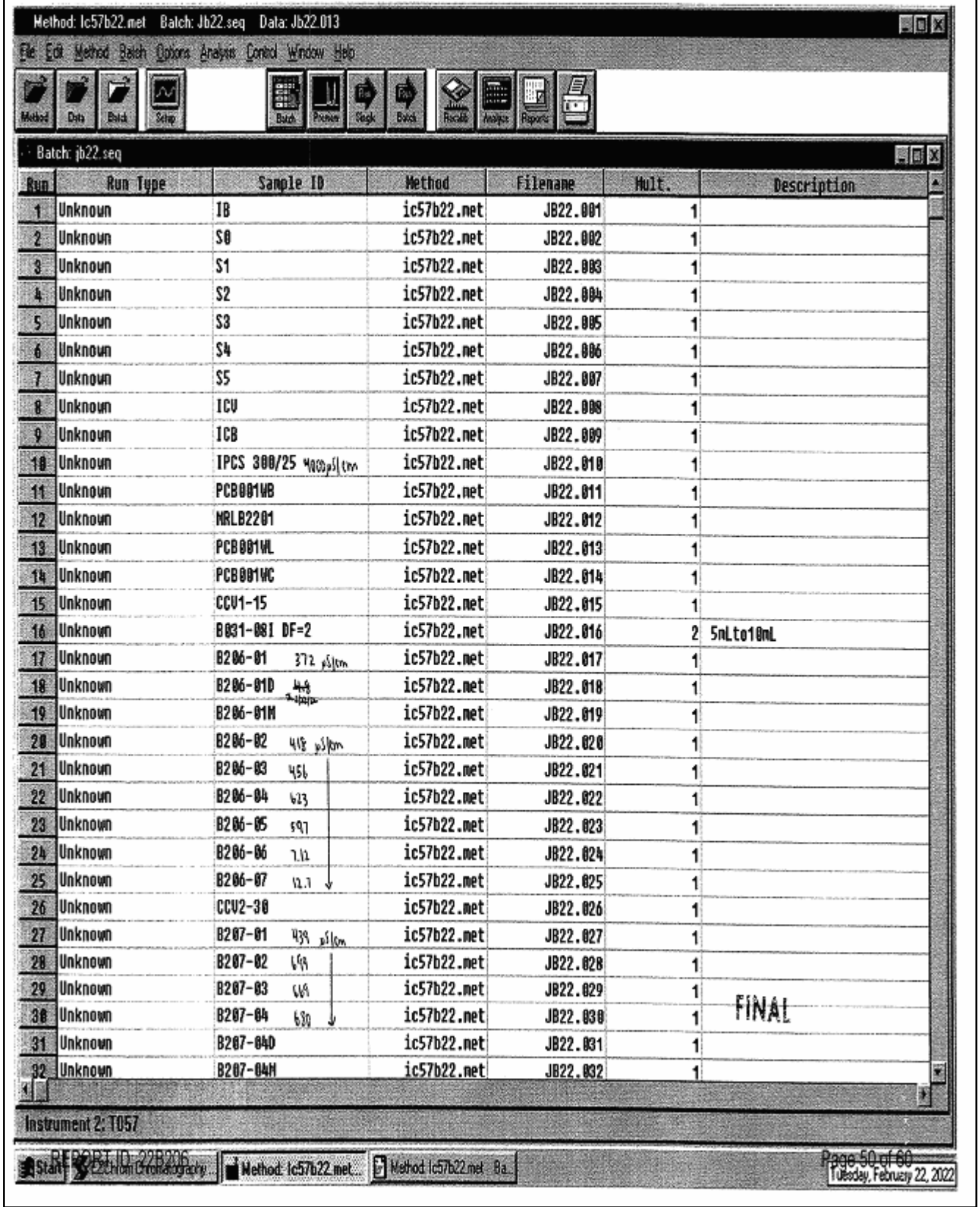

Method: Ic57b22.met Batch: Jb22.seq Data: Jb22.013

File Edit Method Batch Options Analysis Control Window Help

Batch: jb22.seq

Run	Run Type	Sample ID	Method	Filename	Mult.	Description
1	Unknown	IB	ic57b22.net	JB22.001	1	
2	Unknown	S0	ic57b22.net	JB22.002	1	
3	Unknown	S1	ic57b22.net	JB22.003	1	
4	Unknown	S2	ic57b22.net	JB22.004	1	
5	Unknown	S3	ic57b22.net	JB22.005	1	
6	Unknown	S4	ic57b22.net	JB22.006	1	
7	Unknown	S5	ic57b22.net	JB22.007	1	
8	Unknown	ICV	ic57b22.net	JB22.008	1	
9	Unknown	ICB	ic57b22.net	JB22.009	1	
10	Unknown	IPCS 300/25 400psi/cm	ic57b22.net	JB22.010	1	
11	Unknown	PCB001WB	ic57b22.net	JB22.011	1	
12	Unknown	MRLB2201	ic57b22.net	JB22.012	1	
13	Unknown	PCB001WL	ic57b22.net	JB22.013	1	
14	Unknown	PCB001WC	ic57b22.net	JB22.014	1	
15	Unknown	CCV1-15	ic57b22.net	JB22.015	1	
16	Unknown	B031-08I DF=2	ic57b22.net	JB22.016	2	5mLto10mL
17	Unknown	B206-01 372 psi/cm	ic57b22.net	JB22.017	1	
18	Unknown	B206-01D 448	ic57b22.net	JB22.018	1	
19	Unknown	B206-01M	ic57b22.net	JB22.019	1	
20	Unknown	B206-02 418 psi/cm	ic57b22.net	JB22.020	1	
21	Unknown	B206-03 456	ic57b22.net	JB22.021	1	
22	Unknown	B206-04 623	ic57b22.net	JB22.022	1	
23	Unknown	B206-05 597	ic57b22.net	JB22.023	1	
24	Unknown	B206-06 7.11	ic57b22.net	JB22.024	1	
25	Unknown	B206-07 12.7	ic57b22.net	JB22.025	1	
26	Unknown	CCV2-30	ic57b22.net	JB22.026	1	
27	Unknown	B207-01 439 psi/cm	ic57b22.net	JB22.027	1	
28	Unknown	B207-02 699	ic57b22.net	JB22.028	1	
29	Unknown	B207-03 669	ic57b22.net	JB22.029	1	
30	Unknown	B207-04 630	ic57b22.net	JB22.030	1	FINAL
31	Unknown	B207-04D	ic57b22.net	JB22.031	1	
32	Unknown	B207-04M	ic57b22.net	JB22.032	1	

Instrument 2: T057

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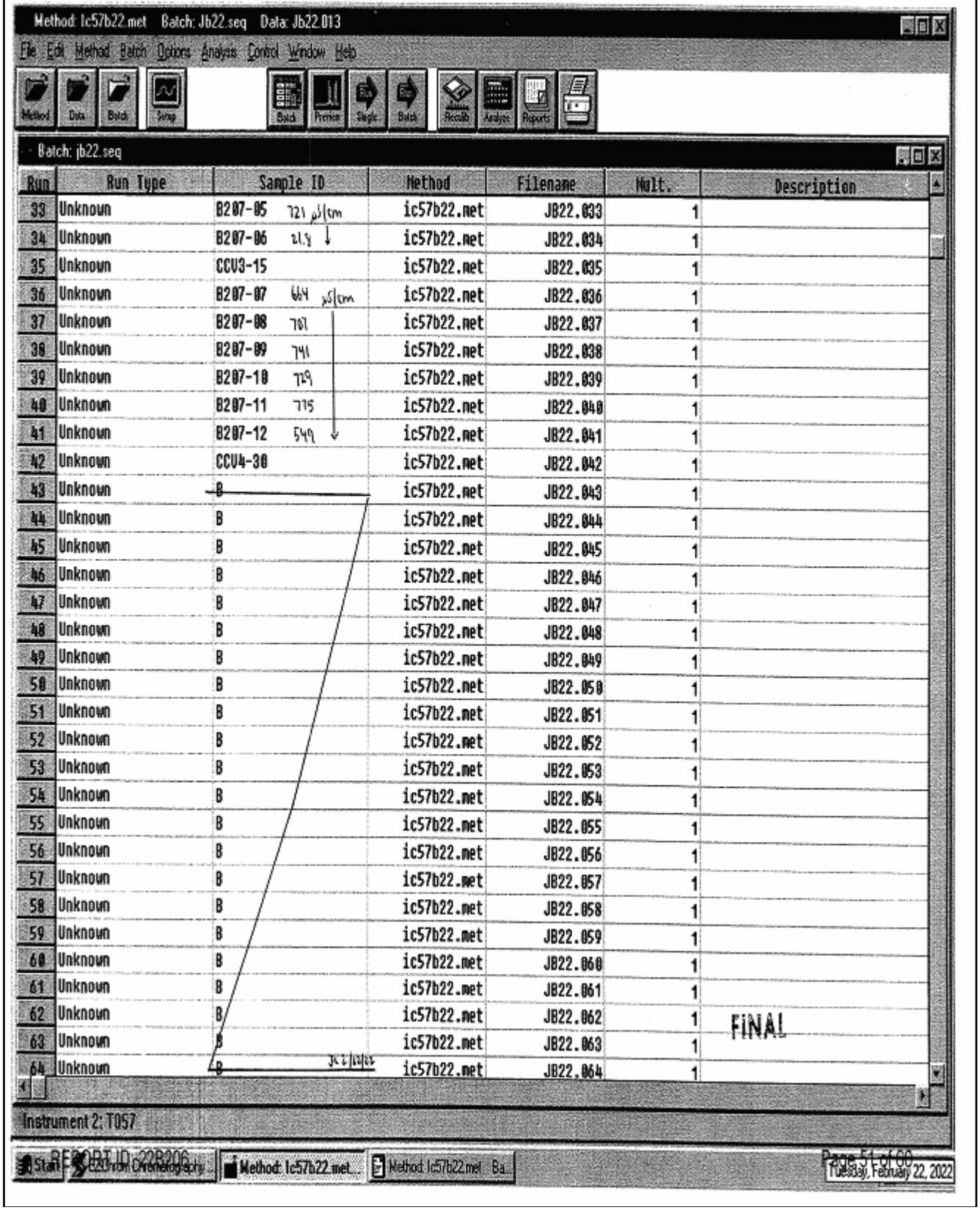
Start 32Chrom Chromatography... Method: Ic57b22.met... Method Ic57b22.met Ba... Tuesday, February 22, 2022



Method: ic57b22.met Batch: Jb22.seq Data: Jb22.013

File Edit Method Batch Options Analysis Control Window Help

Batch: jb22.seq

Run	Run Type	Sample ID	Method	Filename	Mult.	Description
33	Unknown	B207-05 721 µS/cm	ic57b22.net	JB22.033	1	
34	Unknown	B207-06 21.%	ic57b22.net	JB22.034	1	
35	Unknown	CCV3-15	ic57b22.net	JB22.035	1	
36	Unknown	B207-07 664 µS/cm	ic57b22.net	JB22.036	1	
37	Unknown	B207-08 761	ic57b22.net	JB22.037	1	
38	Unknown	B207-09 741	ic57b22.net	JB22.038	1	
39	Unknown	B207-10 729	ic57b22.net	JB22.039	1	
40	Unknown	B207-11 775	ic57b22.net	JB22.040	1	
41	Unknown	B207-12 549	ic57b22.net	JB22.041	1	
42	Unknown	CCV4-30	ic57b22.net	JB22.042	1	
43	Unknown	B	ic57b22.net	JB22.043	1	
44	Unknown	B	ic57b22.net	JB22.044	1	
45	Unknown	B	ic57b22.net	JB22.045	1	
46	Unknown	B	ic57b22.net	JB22.046	1	
47	Unknown	B	ic57b22.net	JB22.047	1	
48	Unknown	B	ic57b22.net	JB22.048	1	
49	Unknown	B	ic57b22.net	JB22.049	1	
50	Unknown	B	ic57b22.net	JB22.050	1	
51	Unknown	B	ic57b22.net	JB22.051	1	
52	Unknown	B	ic57b22.net	JB22.052	1	
53	Unknown	B	ic57b22.net	JB22.053	1	
54	Unknown	B	ic57b22.net	JB22.054	1	
55	Unknown	B	ic57b22.net	JB22.055	1	
56	Unknown	B	ic57b22.net	JB22.056	1	
57	Unknown	B	ic57b22.net	JB22.057	1	
58	Unknown	B	ic57b22.net	JB22.058	1	
59	Unknown	B	ic57b22.net	JB22.059	1	
60	Unknown	B	ic57b22.net	JB22.060	1	
61	Unknown	B	ic57b22.net	JB22.061	1	
62	Unknown	B	ic57b22.net	JB22.062	1	FINAL
63	Unknown	B	ic57b22.net	JB22.063	1	
64	Unknown	B	ic57b22.net	JB22.064	1	

Instrument 2: T057

REPORT ID: 228206

Start | Method: ic57b22.met... | Method: ic57b22.met Ba...

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Tuesday, February 22, 2022

RETENTION TIME WINDOW

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RETENTION TIME WINDOW
METHOD 314.0

Lab Name:	EMAX	**METHOD:**	EMAX-314.0
Instrument ID:	DX500IC57	**IC COLUMN:**	AS16/AG16
		COLUMN SIZE:	4x250mm

Compound	Ical Mean RT	from	to	Retention Time Window
PERCHLORATE	**13.17**	12.92	13.42	**0.246**

IC57B22.MET

8/24/22

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STANDARD LOG(S)

EMAX LABORATORIES, INC.

STANDARDS LOG FOR PERCHLORATE

Book #: SW4B-003

Standard ID	Name	Source	Conc. (mg/L)	Aliquot (ml)	Reagent Water ID	Final Vol (ml)	Final Conc. (mg/L)	Preparation Date	Expiration Date	Prepared By	Comments	Micropipette ID
SW4B-003-06-01	ClO_4	SW4B-003-05-03	1 ppm	0.2 mL	SW1A-011-06-05	100 mL	2 ppb	2/22/22	3/24/22	JC	ItAL	C
SW4B-003-06-				0.4			4					C
SW4B-003-06-				1.0			10					B
SW4B-003-06-				2.5			25					A
SW4B-003-06-				3.0			30					A
SW4B-003-06-02	ClO_4	SW4B-003-05-11	1 ppm	1.5mL	SW1A-011-06-08	100 mL	15 ppb	2/22/22	3/24/22	JC	ICV	B
SW4B-003-06-03	ClO_4	SW4B-003-05-03	1ppm	1.5mL	SW1A-011-06-08	100mL	15 ppb	2/22/22	3/24/22	JC	CCV-15	B
SW4B-003-06-04	ClO_4	SW4B-003-05-03		3.0			30				CCV-30	A
SW4B-003-06-05				0.2			2				MRL	C
SW4B-003-06-06	ClO_4	SW4B-003-05-11 / SW4B-012809	1 ppm / 25000 ppm	2.5mL / 1.2mL	SW1A-011-06-08	100mL	25ppb / 300 ppm	2/22/22	3/24/22	JC	IPCS 300/25	A;B
SW4B-003-06-07	ClO_4	SW4B-003-05-11	1ppm	2.5mL	SW1A-011-06-08	100mL	25 ppb	2/22/22	3/24/22	JC	LCS	A
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												

Micropipette ID Legend: A. SW9A-04-17 B. A42762405 C. SW9A-04-052

REPORT ID: 22B206

EMAX LABORATORIES, INC.

STANDARDS LOG FOR PERCHLORATE

Book #: SW4B-003

Standard ID	Name	Source	Conc. (mg/L)	Aliquot (ml)	Reagent Water ID	Final Vol (ml)	Final Conc. (mg/L)	Preparation Date	Expiration Date	Prepared By	Comments	Micropipette ID
SW4B-003-06-01	ClO_4	SW4B-003-05-03	1 ppm	0.2 mL	SWIR-011-06-08	100 mL	2 ppb	2/22/22	3/24/22	JC	ICAL	C
SW4B-003-06-				0.4			4					C
SW4B-003-06-				1.0			10					B
SW4B-003-06-				2.5			25					A
SW4B-003-06-				3.0			30					A
SW4B-003-06-02	ClO_4	SW4B-003-05-11	1 ppm	1.5 mL	SWIR-011-06-08	100 mL	15 ppb	2/22/22	3/24/22	JC	ICV	B
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-05-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												

Micropipette ID Legend: A. SW9A-04-17 B. A42762405 C. SW9A-04-052

REPORT ID: 22B206

EMAX LABORATORIES, INC.

STANDARDS LOG FOR PERCHLORATE

Book #: SW4B-003

Standard ID	Name	Source	Conc. (mg/L)	Aliquot (ml)	Reagent Water ID	Final Vol (ml)	Final Conc. (mg/L)	Preparation Date	Expiration Date	Prepared By	Comments	Micropipette ID
SW4B-003-05-01	ClO_4	SW4B-003-01-01	1ppm	1.5mL	SWIR-011-05-06	100mL	15ppb	12/15/21	1/15/21	YC	CCV15	B
SW4B-003-05-02	↓	↓	↓	3.0mL	↓	↓	30ppb	↓	↓	↓	CCV30	A
SW4B-003-05-03	ClO_4	SW4A-02-01-01	1000ppm	0.1mL	SWIR-011-05-06	100mL	1ppm	1/4/22	7/4/22	JC	Primary Wk. Std.	C
SW4B-003-05-04	ClO_4	SW4B-003-05-03	1ppm	1.5mL	SWIR-011-05-06	100mL	15ppb	1/4/22	2/3/22	JC	CCV-15	B
SW4B-003-05-05	↓	↓	↓	3.0mL	↓	↓	30ppb	↓	↓	↓	CCV-30	A
SW4B-003-05-06	↓	↓	↓	0.2mL	↓	↓	2ppb	↓	↓	↓	MRL	C
SW4B-003-05-07	ClO_4	~~SW4B-003-05-03~~ SW4A-01-01-08	~~1ppm~~ 1000ppm	~~2.5mL~~ 1.2mL	SWIR-011-05-06	100mL	~~25ppb~~ 300ppb	1/4/22	2/3/22	JC	IPCS 300/25	A; B
SW4B-003-05-08	ClO_4	SW4B-003-05-03	1ppm	2.5mL	SWIR-011-05-06	100mL	25ppb	1/4/22	2/3/22	JC	LCS x1	A
SW4B-003-05-09	ClO_4	SW4B-003-05-03	1ppm	0.2mL	SWIR-011-05-06	100mL	2ppb	1/4/22	2/3/22	JC	LOQ	C
SW4B-003-05-10	↓	↓	↓	0.1mL	↓	↓	1ppb	↓	↓	↓	LOD	C
~~SW4B-003-05-11~~	~~ClO_4~~	~~SW4B~~									2nd 1/26/22	
SW4B-003-05-11	ClO_4	SW4A-02-01-05	1000ppm	0.099mL	SWIR-011-05-06	100mL	1ppm	1/26/22	7/26/22	JC	Secondary Wk. Std.	C
SW4B-003-05-12	ClO_4	~~SW4B-003-05-11~~ SW4A-01-01-09	~~1ppm~~ 1000ppm	~~2.5mL~~ 1.2mL	SWIR-011-05-06	100mL	~~25ppb~~ 300ppb	1/26/22	2/25/22	JC	IPCS 300/25	A; B
SW4B-003-05-13	ClO_4	SW4B-003-05-11	1ppm	2.5mL	SWIR-011-05-06	100mL	25ppb	1/26/22	2/28/22	JC	LCS	A
SW4B-003-05-14	ClO_4	SW4B-003-05-03	1ppm	1.5mL	SWIR-011-05-06	100mL	15ppb	1/27/22	2/26/22	JC	CCV-15	B
SW4B-003-05-15	↓	↓	↓	3.0mL	↓	↓	30ppb	↓	↓	↓	CCV-30	A
SW4B-003-05-16	↓	↓	↓	0.2mL	↓	↓	2ppb	↓	↓	↓	MRL	C
SW4B-003-05-												
SW4B-003-05-												
SW4B-003-05-												
SW4B-003-05-											J. 1/28/22	

Micropipette ID Legend: A. SW9A-04-17 B. A42762405 C. SW9A-04-052

REPORT ID: 22B206

EMAX LABORATORIES, INC.

STANDARDS LOG FOR PERCHLORATE

Book No: SW4A-02

Standard ID	Name	Source	Lot #	Location	Rcvd. on	Rcvd. By	Exp. Date	Comments
SW4A-02-01-01	Perchlorate	AccuStandard	2a1025019	IC	11/22/21	JC	5/5/2027	100mL; 1000ug/mL
SW4A-02-01-02	Dionex OnGuard IIBa	Dionex	210924-1-Ba	Ic	12/13/21	Jc	9/1/2022	1 Box 057093
SW4A-02-01-03	Dionex OnGuard Ag	Dionex	211229-1-Ag	IC	1/11/22	Jc	12/1/2022	1 box 057089
SW4A-02-01-04	Mixed Common Anion Standard	Accu Standard	219035119-02	Ic	1/18/22	Jc	11/7/2023	100mL; M-314.0-HCA-250X-1
SW4A-02-01-05	Perchlorate	Sep Science	S210312007	Ic	1/20/22	Jc	~~5/1/2023~~ 1/24/23 ~~1/24/23~~	500mL; 1008 µg/mL 250-220-581
SW4A-02-01-06	Dionex On Guard II Ag	Dionex	220111-1-A	Ic	1/24/22	Jc	1/1/2023	1 Box 057085
SW4A-02-01-07								
SW4A-02-01-08								
SW4A-02-01-09								
SW4A-02-01-10								

REPORT ID: 22B206

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

SW4A-02-01-01
rcvd: 11/22/21
exp: 5/15/23
YC 11/22/21

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO_4)
SRM: Ind. Std.
Lot: 221025019
Matrix: Water
Hazards: *Refer to SDS for complete safety information*

Signal Word: None

Date Certified: Feb 5, 2021
Expiration: Mar 5, 2023
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB AR-1463 ANAB AT-1338

Component		SRM #	Certified Concentration (µg/mL)
ClO_4	Perchlorate	Ind. Std.	1000

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±2.4%.
The final solution was checked against an independent standard to verify its concentration.
We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as ASTM Type I 18 megohm deionized water.
All glassware used in preparation is Class A.
All weights are traceable through NIST, Test No. 684/289871-17
All bottles are triple rinsed with deionized water prior to use.
Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware. Keep bottle tightly capped.

Certified By: Meigan O'Leary
Meigan O'Leary, Inorganic QC Manager

Page 1 of 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/IND-001 Rev. 7/20

REPORT ID: 22B200 Page 59 of 60

SCP SCIENCE

Providing Innovative Solutions to Analytical Chemists

Certificate of Analysis

SW4A-02-01-05
Revd: 1/20/22 JC
Exp: ~~5/1/2023~~
1/24/23
LC 1/24/22

ClO_4^-

1.0 DESCRIPTION: ***Accu*SPEC – IC Standard – Perchlorate 1000 µg/ml**

Catalogue Number:	**250-220-58x**
Starting Material:	Potassium perchlorate ACS
Lot Number:	**S210812007**
Expiration Date:	**May 2023** (or 12 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Certified Value:	**1008 ± 10 µg/ml**
Method of analysis:	Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES). Result calculated based on the value of the counter-ion.
Traceability:	NIST Standard Reference Material 3141a

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:

Density: **0.999 g/ml @ 23.1°C**

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval:	Yaling Sui, Chemist
Certification Date:	August 26, 2021

Yaling Sui

REPORT ID: 22B206 Pg 1 of / de 2 Page 60 of 60

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:43
Project: JPL- GW Monitoring Wells-CLP
Project Number: 4Q21
Project Manager: David Conner

Notes And Definitions

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

Date of Report: 03/24/2022

David Conner

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Client Project:	1Q22
BCL Project:	JPL- GW Monitoring Wells-CLP
BCL Work Order:	2202145
Invoice ID:	

Enclosed are the results of analyses for samples received by the laboratory on 2/1/2022. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1001281281

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Operations Manager

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

Table of Contents

Table of Contents

BC Laboratories, Inc. — Chain of Custody Form

*Required Fields 22-02145

Page 1 of 2

Report To: Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:* (626) 298 - 5715 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #:

Project Description:* JPL-GW Monitoring
Project Code:* 4Q21
Sampler (s):* Blaine Tech
L. Henderson

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

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 -218.6 (mg/L)	Cl, NO3, NO2, SO4		Orthophosphate 365.1				Notes
-1	TB-2-020122	2/1/22	0800	W	X										
-2	MW-25-5-020122		0900		X	X	X	X							
-3	MW-25-4-020122		0945		X	X	X	X							
-4	MW-25-3-020122		1015		X	X	X	X							
-5	MW-25-2-020122		1045		X	X	X	X							
-6	MW-25-1-020122		1130		X	X	X	X							MS/MSD + level IV
-7	EB-2-020122		1436		X	X	X	X							SHORT HOLDING TIME
-8	MW-19-5-020122		1245		X		X								Cr+6 NO2 NO3 OP SS
-9	MW-19-4-020122		1315		X		X								DO Cl2 BOD MBAS COT
-10	MW-19-3-020122		1345		X		X								CHK BY DISTRIBUTION
-11	DUP-2-1Q22		1355		X		X								WP JPP MT 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 S File (CA Default)
[ ] Geotracker 2 File
[ ] Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By:	2/1/22	1500	1.Received By: Gabe Bloomley	2-1-22	1900
2.Relinquished By: Gabe Bloomley	2-1-22	3:43	2.Received By: Miguel A Cuevas	2/1/22	~~5:00~~
3. Relinquished By: Miguel A Cuevas	2/1/22	5:22	3.Received By:	2/1/22	1722

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

BC Laboratories, Inc.

Chain of Custody Form

22-02145

*Required Fields

Page 2 of 2

Report To: Client:* Tidewater, Inc.	Project Description:* JPL-GW Monitoring
Attn:* David Conner	
Street Address:* 3761 Attucks Drive	Project Code:* 4Q21
City:* Powell State:* OH Zip:* 43065	
Phone#:* (626) 298 - 5715 Fax#: (614) 792 - 2897	Sampler (s):* Blaine Tech
Email Address: david.conner@tideh2o.net	L. Hendersen
Submission #:	

Billing

Client:* Tidewater
Attn:* David Conner
Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065

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

*Standard Turnaround = 10

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 - 218.6 (mg/L)	Cl, NO3, NO2, SO4		Orthophosphate 365.1				Notes
-12	MW-19-2-020122	2-1-22	1415	W	X		X								
-13	MW-19-1-020122		1445	W	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 S File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By:	2/1/22	1500	1.Received By: Gabe Hamberg	2-1-22	1510
2. Relinquished By: Gabe Hamberg	2-1-22	3:45p	2.Received By: Miguel A Cruz	2/1/22	5:22
3. Relinquished By: Miguel A Cruz	2/1/22	5:22	3.Received By:	2/1/22	1722

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

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 2

Submission #: 22-02145

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

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

FREE LIQUID
YES ☐ NO ☐
(W) / S

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

Custody Seals: Ice Chest ☐ 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: 0.98 Container: PE Thermometer ID: 174

Temperature: (A) 1.3 °C / (C) 1.0 °C

Date/Time 2/1/22 1722

Analyst Init PRE

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / (16oz) PE UNPRES		D,E	D,E	D,E	G,H	D	D	D	D	D
2oz Cr+6		H	H	H	K,L	F	F			
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz (8oz) / 16oz		F,G	F,G	F,G	I,J	E	E			
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		A-C	A-C	A-C	A-F	A-C	A-C	A-C	A-C	A-C
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:_____
Sample Numbering Completed By: CAB Date/Time: 2/2/22 0945
A = Actual / C = Corrected

Rev 22 04/13/21
[S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 2

Submission #: 22-02145

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

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

FREE LIQUID
YES ☐ NO ☐
(W) / S

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

Custody Seals: Ice Chest ☐ 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: 0.98 Container: PE Thermometer ID: 174

Temperature: (A) 1.3 °C / (C) 1.0 °C

Date/Time 2/1/22 1722

Analyst Init PRE

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES	D	D	D							
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A-C	A-C	A-C							
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: CAB Date/Time: 2/2/22 0945

A = Actual / C = Corrected

Rev 22 04/13/21

[S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 22]

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202145-01	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 08:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-2-020122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Trip Blank
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202145-02	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-5-020122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-25-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202145-03	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 09:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-4-020122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-25-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc. - Powell
3761 Attucks Drive
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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202145-04	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 10:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-3-020122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-25-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202145-05	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 10:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-2-020122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-25-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202145-06	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 11:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-1-020122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-25-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202145-07	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 14:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-2-020122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202145-08	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 12:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-5-020122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202145-09	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 13:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-4-020122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202145-10	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 13:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-3-020122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202145-11	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 13:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-2-1Q22	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202145-12	**COC Number:**	---	**Receive Date:**	02/01/2022 17:22
	Project Number:	JPL-GW	**Sampling Date:**	02/01/2022 14:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-2-020122	**Lab Matrix:**	Water
	Sampled By:	Blaine Tech - L. Henderson of BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

2202145-13

COC Number: ---
Project Number: JPL-GW
Sampling Location: ---
Sampling Point: MW-19-1-020122
Sampled By: Blaine Tech - L. Henderson of BTST

Receive Date: 02/01/2022 17:22
Sampling Date: 02/01/2022 14:45
Sample Depth: ---
Lab Matrix: Water
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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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-01 | **Client Sample Name:** JPL-GW, TB-2-020122, 2/1/2022 8:00:00AM, Blaine Tech - L. Henderson

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

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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-01 | **Client Sample Name:** JPL-GW, TB-2-020122, 2/1/2022 8:00:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-01 | **Client Sample Name:** JPL-GW, TB-2-020122, 2/1/2022 8:00:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 22:20	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-01 | **Client Sample Name:** JPL-GW, TB-2-020122, 2/1/2022 8:00:00AM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 22:20	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-02 | **Client Sample Name:** JPL-GW, MW-25-5-020122, 2/1/2022 9:00:00AM, Blaine Tech - L. Henderson

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-02 | **Client Sample Name:** JPL-GW, MW-25-5-020122, 2/1/2022 9:00:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-02 | **Client Sample Name:** JPL-GW, MW-25-5-020122, 2/1/2022 9:00:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 22:45	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-02 | **Client Sample Name:** JPL-GW, MW-25-5-020122, 2/1/2022 9:00:00AM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 22:45	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202145-02 | **Client Sample Name:** JPL-GW, MW-25-5-020122, 2/1/2022 9:00:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00022**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000031		1
Total Recoverable Chromium	**1.6**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 18:57	02/03/22 14:40	JAT	IC-4	1	B130867	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:33	KHS	PE-EL4	1	B131048	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-03 | **Client Sample Name:** JPL-GW, MW-25-4-020122, 2/1/2022 9:45:00AM, Blaine Tech - L. Henderson

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-03 | **Client Sample Name:** JPL-GW, MW-25-4-020122, 2/1/2022 9:45:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-03 | **Client Sample Name:** JPL-GW, MW-25-4-020122, 2/1/2022 9:45:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 23:09	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-03 | **Client Sample Name:** JPL-GW, MW-25-4-020122, 2/1/2022 9:45:00AM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 23:09	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202145-03 | **Client Sample Name:** JPL-GW, MW-25-4-020122, 2/1/2022 9:45:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00025**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000031		1
Total Recoverable Chromium	**2.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 18:57	02/03/22 14:49	JAT	IC-4	1	B130867	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:35	KHS	PE-EL4	1	B131048	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-04 | **Client Sample Name:** JPL-GW, MW-25-3-020122, 2/1/2022 10:15:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.37**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-04 | **Client Sample Name:** JPL-GW, MW-25-3-020122, 2/1/2022 10:15:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**2.1**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-04 | **Client Sample Name:** JPL-GW, MW-25-3-020122, 2/1/2022 10:15:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 23:34	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-04 | **Client Sample Name:** JPL-GW, MW-25-3-020122, 2/1/2022 10:15:00AM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 23:34	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202145-04 | **Client Sample Name:** JPL-GW, MW-25-3-020122, 2/1/2022 10:15:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0016**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000031		1
Total Recoverable Chromium	**2.8**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 18:57	02/03/22 14:59	JAT	IC-4	1	B130867	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:37	KHS	PE-EL4	1	B131048	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-05 | **Client Sample Name:** JPL-GW, MW-25-2-020122, 2/1/2022 10:45:00AM, Blaine Tech - L. Henderson

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

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-05 | **Client Sample Name:** JPL-GW, MW-25-2-020122, 2/1/2022 10:45:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.24**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-05 | **Client Sample Name:** JPL-GW, MW-25-2-020122, 2/1/2022 10:45:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	96.2	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 16:37	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-05 | **Client Sample Name:** JPL-GW, MW-25-2-020122, 2/1/2022 10:45:00AM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 16:37	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202145-05 | **Client Sample Name:** JPL-GW, MW-25-2-020122, 2/1/2022 10:45:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0017**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000031		1
Total Recoverable Chromium	**2.0**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 18:57	02/03/22 13:13	JAT	IC-4	1	B130867	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:10	KHS	PE-EL4	1	B131048	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-06 | **Client Sample Name:** JPL-GW, MW-25-1-020122, 2/1/2022 11:30:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.54**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-06 | **Client Sample Name:** JPL-GW, MW-25-1-020122, 2/1/2022 11:30:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	**0.42**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.33**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-06 | **Client Sample Name:** JPL-GW, MW-25-1-020122, 2/1/2022 11:30:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 23:58	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-06 | **Client Sample Name:** JPL-GW, MW-25-1-020122, 2/1/2022 11:30:00AM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/03/22 23:58	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202145-06 | **Client Sample Name:** JPL-GW, MW-25-1-020122, 2/1/2022 11:30:00AM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00017**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000031	**J**	1
Total Recoverable Chromium	**2.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 18:57	02/03/22 15:09	JAT	IC-4	1	B130867	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:38	KHS	PE-EL4	1	B131048	EPA 200.2

DCN = Data Continuation Number

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Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-07 | **Client Sample Name:** JPL-GW, EB-2-020122, 2/1/2022 2:30:00PM, Blaine Tech - L. Henderson

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

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-07 | **Client Sample Name:** JPL-GW, EB-2-020122, 2/1/2022 2:30:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-07 | **Client Sample Name:** JPL-GW, EB-2-020122, 2/1/2022 2:30:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 00:23	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-07 | **Client Sample Name:** JPL-GW, EB-2-020122, 2/1/2022 2:30:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 00:23	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202145-07 | **Client Sample Name:** JPL-GW, EB-2-020122, 2/1/2022 2:30:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000066**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000031	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/02/22 18:57	02/03/22 15:18	JAT	IC-4	1	B130867	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:40	KHS	PE-EL4	1	B131048	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-08 | **Client Sample Name:** JPL-GW, MW-19-5-020122, 2/1/2022 12:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**4.6**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.19**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-08 | **Client Sample Name:** JPL-GW, MW-19-5-020122, 2/1/2022 12:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**2.1**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.68**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-08 | **Client Sample Name:** JPL-GW, MW-19-5-020122, 2/1/2022 12:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 00:47	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-08 | **Client Sample Name:** JPL-GW, MW-19-5-020122, 2/1/2022 12:45:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 00:47	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-09 | **Client Sample Name:** JPL-GW, MW-19-4-020122, 2/1/2022 1:15:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**4.7**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.24**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.40**	**ug/L**	**0.50**	**0.27**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-09 | **Client Sample Name:** JPL-GW, MW-19-4-020122, 2/1/2022 1:15:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**2.7**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**1.0**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-09 | **Client Sample Name:** JPL-GW, MW-19-4-020122, 2/1/2022 1:15:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 01:12	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-09 | **Client Sample Name:** JPL-GW, MW-19-4-020122, 2/1/2022 1:15:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 01:12	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-10 | **Client Sample Name:** JPL-GW, MW-19-3-020122, 2/1/2022 1:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**3.3**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.24**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.42**	**ug/L**	**0.50**	**0.27**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-10 | **Client Sample Name:** JPL-GW, MW-19-3-020122, 2/1/2022 1:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**2.9**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.97**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-10 | **Client Sample Name:** JPL-GW, MW-19-3-020122, 2/1/2022 1:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.1	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 03:38	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-10 | **Client Sample Name:** JPL-GW, MW-19-3-020122, 2/1/2022 1:45:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 03:38	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-11 | **Client Sample Name:** JPL-GW, DUP-2-1Q22, 2/1/2022 1:55:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**3.3**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.24**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.38**	**ug/L**	**0.50**	**0.27**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-11 | **Client Sample Name:** JPL-GW, DUP-2-1Q22, 2/1/2022 1:55:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**3.0**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**1.0**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-11 | **Client Sample Name:** JPL-GW, DUP-2-1Q22, 2/1/2022 1:55:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 04:02	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-11 | **Client Sample Name:** JPL-GW, DUP-2-1Q22, 2/1/2022 1:55:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 04:02	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-12 | **Client Sample Name:** JPL-GW, MW-19-2-020122, 2/1/2022 2:15:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**1.6**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-12 | **Client Sample Name:** JPL-GW, MW-19-2-020122, 2/1/2022 2:15:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.6**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.83**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-12 | **Client Sample Name:** JPL-GW, MW-19-2-020122, 2/1/2022 2:15:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.4	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 04:27	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-12 | **Client Sample Name:** JPL-GW, MW-19-2-020122, 2/1/2022 2:15:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 07:00	02/04/22 04:27	MGC	MS-V5	1	B130891	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-13 | **Client Sample Name:** JPL-GW, MW-19-1-020122, 2/1/2022 2:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**1.1**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-13 | **Client Sample Name:** JPL-GW, MW-19-1-020122, 2/1/2022 2:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202145-13 | **Client Sample Name:** JPL-GW, MW-19-1-020122, 2/1/2022 2:45:00PM, Blaine Tech - L. Henderson

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 10:09	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202145-13 | **Client Sample Name:** JPL-GW, MW-19-1-020122, 2/1/2022 2:45:00PM, Blaine Tech - L. Henderson

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 10:09	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B130891						
Benzene	B130891-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B130891-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B130891-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B130891-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B130891-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B130891-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B130891-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B130891-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B130891-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B130891-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B130891-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B130891-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B130891-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B130891-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B130891-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B130891-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B130891-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B130891-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B130891-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B130891-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B130891-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B130891-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B130891-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B130891-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B130891-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B130891-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B130891-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B130891-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B130891-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B130891-BLK1	ND	ug/L	0.50	0.14	

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Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B130891						
trans-1,3-Dichloropropene	B130891-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B130891-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B130891-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B130891-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B130891-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B130891-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B130891-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B130891-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B130891-BLK1	ND	ug/L	0.50	0.12	
Styrene	B130891-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B130891-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B130891-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B130891-BLK1	ND	ug/L	0.50	0.23	
Toluene	B130891-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B130891-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B130891-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B130891-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B130891-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B130891-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B130891-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B130891-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B130891-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B130891-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B130891-BLK1	ND	ug/L	0.50	0.18	
Acetone	B130891-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B130891-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B130891-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B130891-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B130891-BLK1	ND	ug/L	2.0	2.0	
Carbon disulfide	B130891-BLK1	ND	ug/L	0.50	0.48	
trans-1,4-Dichloro-2-butene	B130891-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B130891-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B130891-BLK1	ND	ug/L	4.0	1.3	

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Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B130891						
Ethyl t-butyl ether	B130891-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B130891-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B130891-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B130891-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B130891-BLK1	ND	ug/L	5.0	3.3	
Methyl iodide	B130891-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B130891-BLK1	ND	ug/L	5.0	2.4	
Methyl methacrylate	B130891-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B130891-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B130891-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B130891-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B130891-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B130891-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	**B130891-BLK1**	**96.6**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B130891-BLK1**	**99.7**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B130891-BLK1**	**97.4**	%	**80 - 120 (LCL - UCL)**		
QC Batch ID: B130892						
Benzene	B130892-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B130892-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B130892-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B130892-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B130892-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B130892-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B130892-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B130892-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B130892-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B130892-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B130892-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B130892-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B130892-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B130892-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B130892-BLK1	ND	ug/L	0.50	0.093	

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Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B130892						
Dibromochloromethane	B130892-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B130892-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B130892-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B130892-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B130892-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B130892-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B130892-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B130892-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B130892-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B130892-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B130892-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B130892-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B130892-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B130892-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B130892-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B130892-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B130892-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B130892-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B130892-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B130892-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B130892-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B130892-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B130892-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B130892-BLK1	ND	ug/L	0.50	0.12	
Styrene	B130892-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B130892-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B130892-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B130892-BLK1	ND	ug/L	0.50	0.23	
Toluene	B130892-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.15	

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Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B130892						
1,1,1-Trichloroethane	B130892-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B130892-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B130892-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B130892-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B130892-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B130892-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B130892-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B130892-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B130892-BLK1	ND	ug/L	0.50	0.18	
Acetone	B130892-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B130892-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B130892-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B130892-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B130892-BLK1	ND	ug/L	2.0	2.0	
Carbon disulfide	B130892-BLK1	ND	ug/L	0.50	0.48	
trans-1,4-Dichloro-2-butene	B130892-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B130892-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B130892-BLK1	ND	ug/L	4.0	1.3	
Ethyl t-butyl ether	B130892-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B130892-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B130892-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B130892-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B130892-BLK1	ND	ug/L	5.0	3.3	
Methyl iodide	B130892-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B130892-BLK1	ND	ug/L	5.0	2.4	
Methyl methacrylate	B130892-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B130892-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B130892-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B130892-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B130892-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B130892-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	**B130892-BLK1**	**105**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B130892-BLK1**	**99.2**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B130892-BLK1**	**97.3**	%	**80 - 120 (LCL - UCL)**		

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Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B130891										
Benzene	B130891-BS1	LCS	23.970	25.000	ug/L	95.9		70 - 130		
Bromodichloromethane	B130891-BS1	LCS	23.980	25.000	ug/L	95.9		70 - 130		
Chlorobenzene	B130891-BS1	LCS	22.920	25.000	ug/L	91.7		70 - 130		
Chloroethane	B130891-BS1	LCS	24.390	25.000	ug/L	97.6		70 - 130		
1,4-Dichlorobenzene	B130891-BS1	LCS	22.780	25.000	ug/L	91.1		70 - 130		
1,1-Dichloroethane	B130891-BS1	LCS	23.950	25.000	ug/L	95.8		70 - 130		
1,1-Dichloroethene	B130891-BS1	LCS	25.040	25.000	ug/L	100		70 - 130		
Toluene	B130891-BS1	LCS	23.780	25.000	ug/L	95.1		70 - 130		
Trichloroethene	B130891-BS1	LCS	23.730	25.000	ug/L	94.9		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B130891-BS1	LCS	9.8200	10.000	ug/L	98.2		75 - 125		
Toluene-d8 (Surrogate)	B130891-BS1	LCS	10.150	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	B130891-BS1	LCS	10.140	10.000	ug/L	101		80 - 120		
QC Batch ID: B130892										
Benzene	B130892-BS1	LCS	23.790	25.000	ug/L	95.2		70 - 130		
Bromodichloromethane	B130892-BS1	LCS	24.550	25.000	ug/L	98.2		70 - 130		
Chlorobenzene	B130892-BS1	LCS	22.510	25.000	ug/L	90.0		70 - 130		
Chloroethane	B130892-BS1	LCS	23.160	25.000	ug/L	92.6		70 - 130		
1,4-Dichlorobenzene	B130892-BS1	LCS	22.470	25.000	ug/L	89.9		70 - 130		
1,1-Dichloroethane	B130892-BS1	LCS	23.980	25.000	ug/L	95.9		70 - 130		
1,1-Dichloroethene	B130892-BS1	LCS	25.350	25.000	ug/L	101		70 - 130		
Toluene	B130892-BS1	LCS	23.470	25.000	ug/L	93.9		70 - 130		
Trichloroethene	B130892-BS1	LCS	23.750	25.000	ug/L	95.0		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B130892-BS1	LCS	10.370	10.000	ug/L	104		75 - 125		
Toluene-d8 (Surrogate)	B130892-BS1	LCS	10.130	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	B130892-BS1	LCS	9.8400	10.000	ug/L	98.4		80 - 120		

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B130891	Used client sample: Y - Description: MW-25-2-020122, 02/01/2022 10:45										
Benzene	MS	2202145-05	ND	23.650	25.000	ug/L		94.6		70 - 130	
	MSD	2202145-05	ND	23.770	25.000	ug/L	0.5	95.1	20	70 - 130	
Bromodichloromethane	MS	2202145-05	ND	23.870	25.000	ug/L		95.5		70 - 130	
	MSD	2202145-05	ND	23.380	25.000	ug/L	2.1	93.5	20	70 - 130	
Chlorobenzene	MS	2202145-05	ND	22.590	25.000	ug/L		90.4		70 - 130	
	MSD	2202145-05	ND	22.770	25.000	ug/L	0.8	91.1	20	70 - 130	
Chloroethane	MS	2202145-05	ND	24.060	25.000	ug/L		96.2		70 - 130	
	MSD	2202145-05	ND	23.320	25.000	ug/L	3.1	93.3	20	70 - 130	
1,4-Dichlorobenzene	MS	2202145-05	ND	23.580	25.000	ug/L		94.3		70 - 130	
	MSD	2202145-05	ND	22.930	25.000	ug/L	2.8	91.7	20	70 - 130	
1,1-Dichloroethane	MS	2202145-05	ND	23.490	25.000	ug/L		94.0		70 - 130	
	MSD	2202145-05	ND	23.790	25.000	ug/L	1.3	95.2	20	70 - 130	
1,1-Dichloroethene	MS	2202145-05	ND	24.920	25.000	ug/L		99.7		70 - 130	
	MSD	2202145-05	ND	25.080	25.000	ug/L	0.6	100	20	70 - 130	
Toluene	MS	2202145-05	ND	23.520	25.000	ug/L		94.1		70 - 130	
	MSD	2202145-05	ND	23.450	25.000	ug/L	0.3	93.8	20	70 - 130	
Trichloroethene	MS	2202145-05	ND	23.520	25.000	ug/L		94.1		70 - 130	
	MSD	2202145-05	ND	23.520	25.000	ug/L	0	94.1	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2202145-05	ND	9.4600	10.000	ug/L		94.6		75 - 125	
	MSD	2202145-05	ND	9.7300	10.000	ug/L	2.8	97.3		75 - 125	
Toluene-d8 (Surrogate)	MS	2202145-05	ND	9.9800	10.000	ug/L		99.8		80 - 120	
	MSD	2202145-05	ND	9.8600	10.000	ug/L	1.2	98.6		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	2202145-05	ND	10.140	10.000	ug/L		101		80 - 120	
	MSD	2202145-05	ND	9.8400	10.000	ug/L	3.0	98.4		80 - 120	
QC Batch ID: B130892	Used client sample: N										
Benzene	MS	2202321-02	ND	24.050	25.000	ug/L		96.2		70 - 130	
	MSD	2202321-02	ND	22.710	25.000	ug/L	5.7	90.8	20	70 - 130	
Bromodichloromethane	MS	2202321-02	ND	24.800	25.000	ug/L		99.2		70 - 130	
	MSD	2202321-02	ND	23.180	25.000	ug/L	6.8	92.7	20	70 - 130	
Chlorobenzene	MS	2202321-02	ND	23.590	25.000	ug/L		94.4		70 - 130	
	MSD	2202321-02	ND	22.050	25.000	ug/L	6.7	88.2	20	70 - 130	
Chloroethane	MS	2202321-02	ND	23.090	25.000	ug/L		92.4		70 - 130	
	MSD	2202321-02	ND	22.820	25.000	ug/L	1.2	91.3	20	70 - 130	
1,4-Dichlorobenzene	MS	2202321-02	ND	23.990	25.000	ug/L		96.0		70 - 130	
	MSD	2202321-02	ND	22.090	25.000	ug/L	8.2	88.4	20	70 - 130	
1,1-Dichloroethane	MS	2202321-02	ND	23.910	25.000	ug/L		95.6		70 - 130	
	MSD	2202321-02	ND	23.040	25.000	ug/L	3.7	92.2	20	70 - 130	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B130892	Used client sample: N										
1,1-Dichloroethene	MS	2202321-02	ND	25.720	25.000	ug/L		103		70 - 130	
	MSD	2202321-02	ND	24.550	25.000	ug/L	4.7	98.2	20	70 - 130	
Toluene	MS	2202321-02	ND	24.130	25.000	ug/L		96.5		70 - 130	
	MSD	2202321-02	ND	22.560	25.000	ug/L	6.7	90.2	20	70 - 130	
Trichloroethene	MS	2202321-02	ND	24.020	25.000	ug/L		96.1		70 - 130	
	MSD	2202321-02	ND	22.890	25.000	ug/L	4.8	91.6	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2202321-02	ND	9.9900	10.000	ug/L		99.9		75 - 125	
	MSD	2202321-02	ND	9.9100	10.000	ug/L	0.8	99.1		75 - 125	
Toluene-d8 (Surrogate)	MS	2202321-02	ND	9.9000	10.000	ug/L		99.0		80 - 120	
	MSD	2202321-02	ND	9.9000	10.000	ug/L	0	99.0		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	2202321-02	ND	10.240	10.000	ug/L		102		80 - 120	
	MSD	2202321-02	ND	10.050	10.000	ug/L	1.9	100		80 - 120	

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B130891						
Chloroacetonitrile	B130891-BLK1	0	ug/L			
1-Chlorobutane	B130891-BLK1	0	ug/L			
1,1-Dichloropropanone	B130891-BLK1	0	ug/L			
Methyl acrylate	B130891-BLK1	0	ug/L			
Nitrobenzene	B130891-BLK1	0	ug/L			
2-Nitropropane	B130891-BLK1	0	ug/L			
QC Batch ID: B130892						
Chloroacetonitrile	B130892-BLK1	0	ug/L			
1-Chlorobutane	B130892-BLK1	0	ug/L			
1,1-Dichloropropanone	B130892-BLK1	0	ug/L			
Methyl acrylate	B130892-BLK1	0	ug/L			
Nitrobenzene	B130892-BLK1	0	ug/L			
2-Nitropropane	B130892-BLK1	0	ug/L			

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B130867						
Hexavalent Chromium	**B130867-BLK1**	**0.000031000**	**mg/L**	**0.00020**	**0.000020**	**J**
QC Batch ID: B131048						
Total Recoverable Chromium	B131048-BLK1	ND	ug/L	3.0	0.50	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B130867										
Hexavalent Chromium	B130867-BS1	LCS	0.020265	0.020000	mg/L	101		90 - 110		
	B130867-BSD1	LCSD	0.020279	0.020000	mg/L	101	0.1	90 - 110	10	
QC Batch ID: B131048										
Total Recoverable Chromium	B131048-BS1	LCS	42.774	40.000	ug/L	107		85 - 115		

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:44
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B130867	Used client sample: Y - Description: MW-25-2-020122, 02/01/2022 10:45										
Hexavalent Chromium	DUP	2202145-05	0.0016930	0.0016840		mg/L	0.5		10		
	MS	2202145-05	0.0016930	0.022276	0.020202	mg/L		102		90 - 110	
	MSD	2202145-05	0.0016930	0.022284	0.020202	mg/L	0.0	102	10	90 - 110	
QC Batch ID: B131048	Used client sample: Y - Description: MW-25-2-020122, 02/01/2022 10:45										
Total Recoverable Chromium	DUP	**2202145-05**	**1.9880**	**2.4470**		**ug/L**	**20.7**		**20**		**J,A02**
	MS	**2202145-05**	**1.9880**	**41.072**	**40.000**	**ug/L**		**97.7**		**70 - 130**	
	MSD	**2202145-05**	**1.9880**	**41.691**	**40.000**	**ug/L**	**1.5**	**99.3**	**20**	**70 - 130**	

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 03-08-2022
EMAX Batch No.: 228207

Attn: Natalie Serda

Pace Analytical
4100 Atlas Court
Bakersfield CA 93308

Subject: Laboratory Report
Project: 2202145

Enclosed is the Laboratory report for samples received on 02/22/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
2202145-02	B207-01	02/01/22	WATER	PERCHLORATE BY IC
2202145-03	B207-02	02/01/22	WATER	PERCHLORATE BY IC
2202145-04	B207-03	02/01/22	WATER	PERCHLORATE BY IC
2202145-05	B207-04	02/01/22	WATER	PERCHLORATE BY IC
2202145-06	B207-05	02/01/22	WATER	PERCHLORATE BY IC
2202145-07	B207-06	02/01/22	WATER	PERCHLORATE BY IC
2202145-08	B207-07	02/01/22	WATER	PERCHLORATE BY IC
2202145-09	B207-08	02/01/22	WATER	PERCHLORATE BY IC
2202145-10	B207-09	02/01/22	WATER	PERCHLORATE BY IC
2202145-11	B207-10	02/01/22	WATER	PERCHLORATE BY IC
2202145-12	B207-11	02/01/22	WATER	PERCHLORATE BY IC
2202145-13	B207-12	02/01/22	WATER	PERCHLORATE BY IC
2202145-05MS	B207-04M	02/01/22	WATER	PERCHLORATE BY IC
2202145-05DUP	B207-04D	02/01/22	WATER	PERCHLORATE BY IC

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

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912021-19
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

REPORT ID: 22B207

Page 1 of 66

22B207

SUBCONTRACT ORDER

BC Laboratories

2202145

SENDING LABORATORY:

BC Laboratories
4100 Atlas Ct
Bakersfield, CA 93308
Phone: 661-327-4911
Fax: 661-327-1918
Project Manager: Natalie Serda

RECEIVING LABORATORY:

Emax Laboratory $EMAXA
3051 Fujita Street
Torrance, CA 90505
Phone :(310) 618-8889
Fax: 310-618-0818

EDF on all
ne 2/22

	Analysis	Due	Expires	Laboratory ID	Comments
1	**Sample ID: 2202145-02**	**Water**	**Sampled:02/01/22 09:00**		**Level III (Global ID #0000000000, BTST) EDF**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 09:00		
	Containers Supplied: P+ P6				
2	**Sample ID: 2202145-03**	**Water**	**Sampled:02/01/22 09:45**		**Level III**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 09:45		
	Containers Supplied: u /				
3	**Sample ID: 2202145-04**	**Water**	**Sampled:02/01/22 10:15**		**Level III**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 10:15		
	Containers Supplied: c /				
4	**Sample ID: 2202145-05**	**Water**	**Sampled:02/01/22 10:45**		**Level IV MS/MSD**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 10:45		
	Containers Supplied: u /				
5	**Sample ID: 2202145-06**	**Water**	**Sampled:02/01/22 11:30**		**Level III**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 11:30		
	Containers Supplied: u r				

Released By — Date 2-21-22 — Received By — Date

Released By — Date — Received By — Date 2/22/22 9:56

Page 1 of 2

Temp 4.9/4.4

REPORT ID: 22B207

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SUBCONTRACT ORDER

BC Laboratories

2202145

	Analysis	Due	Expires	Laboratory ID	Comments
6	**Sample ID: 2202145-07**	**Water**	**Sampled:02/01/22 14:30**		**Level III**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 14:30		
	Containers Supplied:				
7	**Sample ID: 2202145-08**	**Water**	**Sampled:02/01/22 12:45**		**Level III**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 12:45		
	Containers Supplied:				
8	**Sample ID: 2202145-09**	**Water**	**Sampled:02/01/22 13:15**		**Level III**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 13:15		
	Containers Supplied:				
9	**Sample ID: 2202145-10**	**Water**	**Sampled:02/01/22 13:45**		**Level III**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 13:45		
	Containers Supplied:				
10	**Sample ID: 2202145-11**	**Water**	**Sampled:02/01/22 13:55**		**Level III**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 13:55		
	Containers Supplied:				
11	**Sample ID: 2202145-12**	**Water**	**Sampled:02/01/22 14:15**		**Level III**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 14:15		
	Containers Supplied:				
12	**Sample ID: 2202145-13**	**Water**	**Sampled:02/01/22 14:45**		**Level III**
	i314.0w Perchlorate (ug/L)	02/15/22 17:00	03/01/22 14:45		
	Containers Supplied:				

Released By 2-21-22 Date Received By Date

Released By Date Received By 2/22/22 9:50 Date

Temp 4.9 /4.9

SAMPLE RECEIPT FORM 1

Reference: Addendum SM02.11.1
Form: SM02F1

Type of Delivery JZ 2/22/22	Airbill / Tracking Number	ECN 22B207
☐ Fedex ☐ UPS ☑ GSO ~~☐ Other~~ GSO	470570221223718 39404	Recipient Jhoiwin Zamora
☐ EMAX Courier ☐ Client Delivery		Date 2/22/22 Time 9:56

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	☑ Plastic Bags
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 4.9/4.4 °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 ~~210191060~~ 1/4/4	B - S/N 210271396	(C) S/N 210271399	D - S/N ___	

*correction factor -0.5

Comments: ☐ Temperature is out of range. PM was informed IMMEDIATELY.
Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1-12	1-12	D1		R1

2/22/22 EA for RS

☐ 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: Sample #4, MS/MSD

LEGEND:

☐ Continue to next page.

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
(D1)	Analysis is not indicated in label	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 Jhoiwin Zamora / [signature] Date 2/22/22 / 2/23/22
SRF [signature] Date 2/22/22
PM EA for RS Date 2/23/22

REPORT ID: 22B207

EMAX Laboratories, Inc. 3051 Fujita St., Torrance, CA 90505

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REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than LOQ/RL but greater than LOD/MDL/DL.
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
MDL	Method Detection Limit
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
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.

REPORT ID: 22B207 Page 5 of 66

LABORATORY REPORT FOR

PACE ANALYTICAL

2202145

METHOD E314.0
PERCHLORATE

SDG#: 22B207

REPORT ID: 22B207 Page 6 of 66

CASE NARRATIVE

Client : PACE ANALYTICAL

Project: 2202145

SDG : 22B207

METHOD E314.0
PERCHLORATE

A total of twelve(12) water samples were received on 02/22/22 to be analyzed for Perchlorate in accordance with Method E314.0 and project specific requirements.

Holding Time
Samples were 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 out 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. Perchlorate was not detected in PCB001WB. 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. PCB001WL/PCB001WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) MS was analyzed. Percent recovery for Perchlorate was within MS QC limits in B207-04M. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RESULTS

METHOD E314.0
PERCHLORATE

Client : PACE ANALYTICAL
Project : 2202145
Batch No. : 22B207

Matrix : WATER
InstrumentID : 57

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N. FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLKIW	PCB001MB	ND	1	NA	2.00	0.500	1.00	02/22/2219:43	NA	22JB22011	22JB22010	PCB001W	NA	NA
LCSIW	PCB001WL	25.6	1	NA	2.00	0.500	1.00	02/22/2220:27	NA	22JB22013	22JB22010	PCB001W	NA	NA
LCDIW	PCB001WC	25.4	1	NA	2.00	0.500	1.00	02/22/2220:53	NA	22JB22014	22JB22010	PCB001W	NA	NA
2202145-02	B207-01	ND	1	NA	2.00	0.500	1.00	02/23/2201:26	NA	22JB22027	22JB22026	PCB001W	02/01/2209:00	02/22/22
2202145-03	B207-02	9.51	1	NA	2.00	0.500	1.00	02/23/2201:47	NA	22JB22028	22JB22026	PCB001W	02/01/2209:45	02/22/22
2202145-04	B207-03	11.4	1	NA	2.00	0.500	1.00	02/23/2202:08	NA	22JB22029	22JB22026	PCB001W	02/01/2210:15	02/22/22
2202145-05	B207-04	13.4	1	NA	2.00	0.500	1.00	02/23/2202:29	NA	22JB22030	22JB22026	PCB001W	02/01/2210:45	02/22/22
2202145-05DUP	B207-04D	13.6	1	NA	2.00	0.500	1.00	02/23/2202:50	NA	22JB22031	22JB22026	PCB001W	02/01/2210:45	02/22/22
2202145-05MS	B207-04M	30.0	1	NA	2.00	0.500	1.00	02/23/2203:11	NA	22JB22032	22JB22026	PCB001W	02/01/2210:45	02/22/22
2202145-06	B207-05	8.30	1	NA	2.00	0.500	1.00	02/23/2203:32	NA	22JB22033	22JB22026	PCB001W	02/01/2211:30	02/22/22
2202145-07	B207-06	ND	1	NA	2.00	0.500	1.00	02/23/2203:53	NA	22JB22034	22JB22026	PCB001W	02/01/2214:30	02/22/22
2202145-08	B207-07	3.23	1	NA	2.00	0.500	1.00	02/23/2204:35	NA	22JB22036	22JB22035	PCB001W	02/01/2212:45	02/22/22
2202145-09	B207-08	3.48	1	NA	2.00	0.500	1.00	02/23/2204:56	NA	22JB22037	22JB22035	PCB001W	02/01/2213:15	02/22/22
2202145-10	B207-09	4.55	1	NA	2.00	0.500	1.00	02/23/2205:17	NA	22JB22038	22JB22035	PCB001W	02/01/2213:45	02/22/22
2202145-11	B207-10	4.32	1	NA	2.00	0.500	1.00	02/23/2205:38	NA	22JB22039	22JB22035	PCB001W	02/01/2213:55	02/22/22
2202145-12	B207-11	3.38	1	NA	2.00	0.500	1.00	02/23/2205:59	NA	22JB22040	22JB22035	PCB001W	02/01/2214:15	02/22/22
2202145-13	B207-12	ND	1	NA	2.00	0.500	1.00	02/23/2206:20	NA	22JB22041	22JB22035	PCB001W	02/01/2214:45	02/22/22

Note: Detection limits are reported relative to sample result significant figures.

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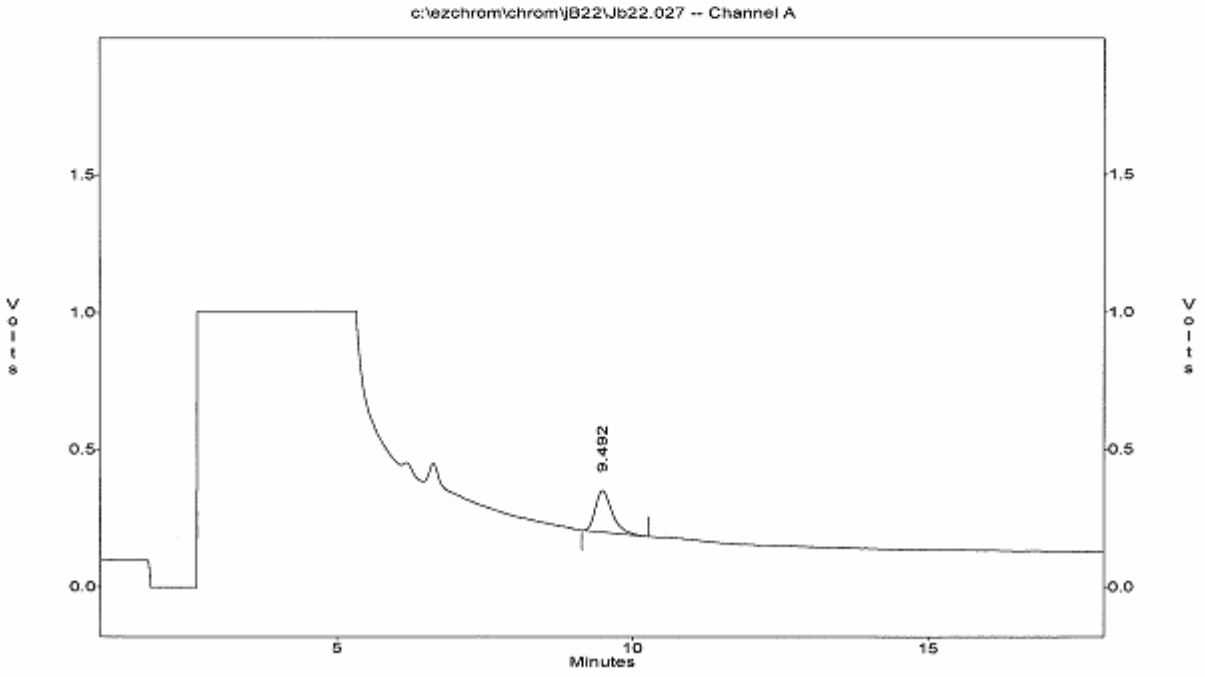
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.027
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-01
Acquired : Feb 23, 2022 01:26:30
Printed : Feb 23, 2022 01:47:31
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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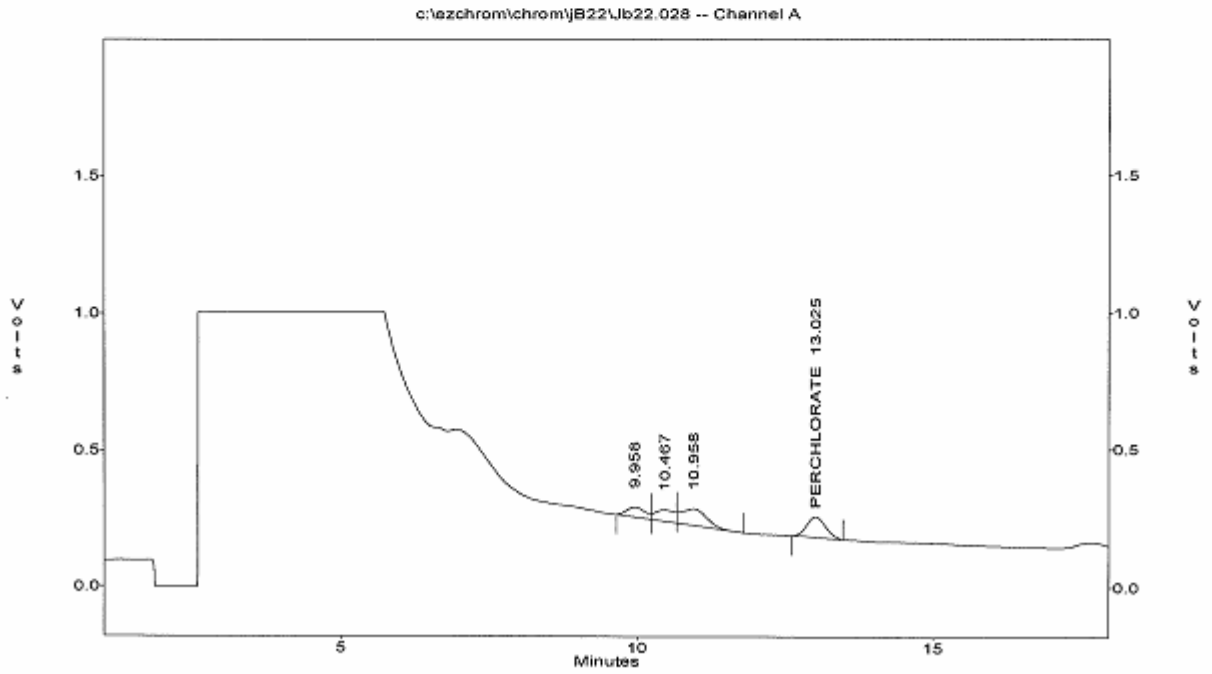
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.028
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-02
Acquired : Feb 23, 2022 01:47:32
Printed : Feb 23, 2022 02:08:33
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
4	PERCHLORATE	13.02	1671030	75331	171880.766	9.511



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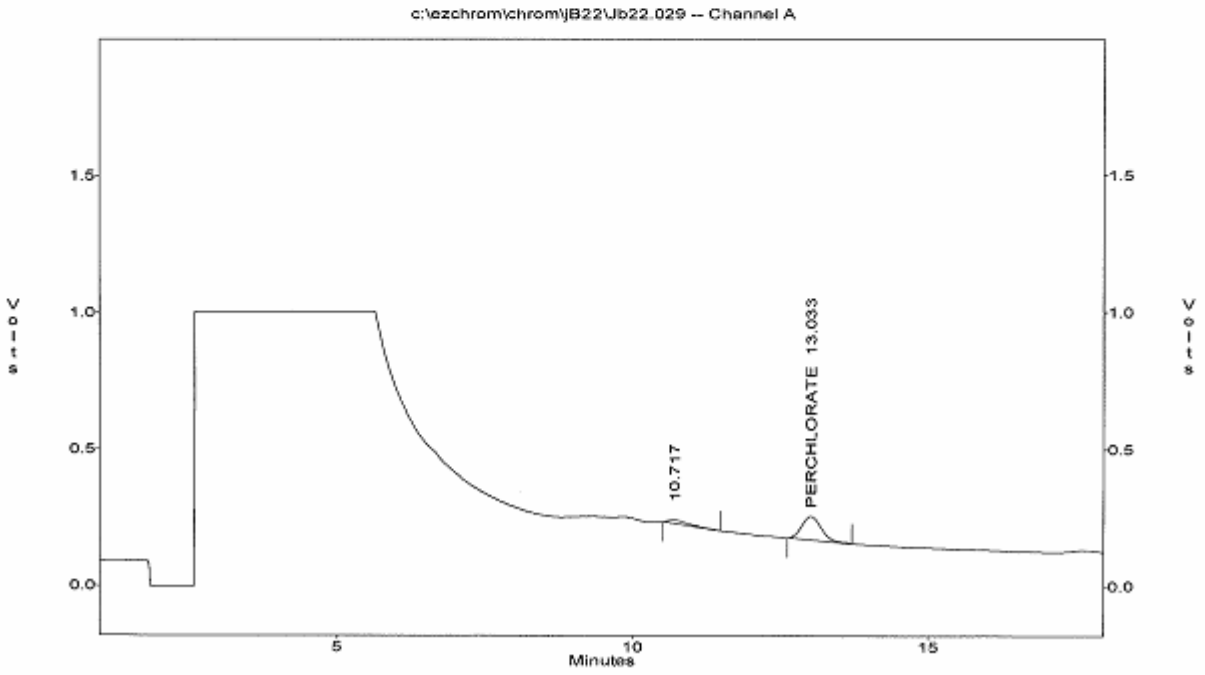
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.029
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-03
Acquired : Feb 23, 2022 02:08:33
Printed : Feb 23, 2022 02:29:34
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
2	PERCHLORATE	13.03	2008188	86659	171880.766	11.356



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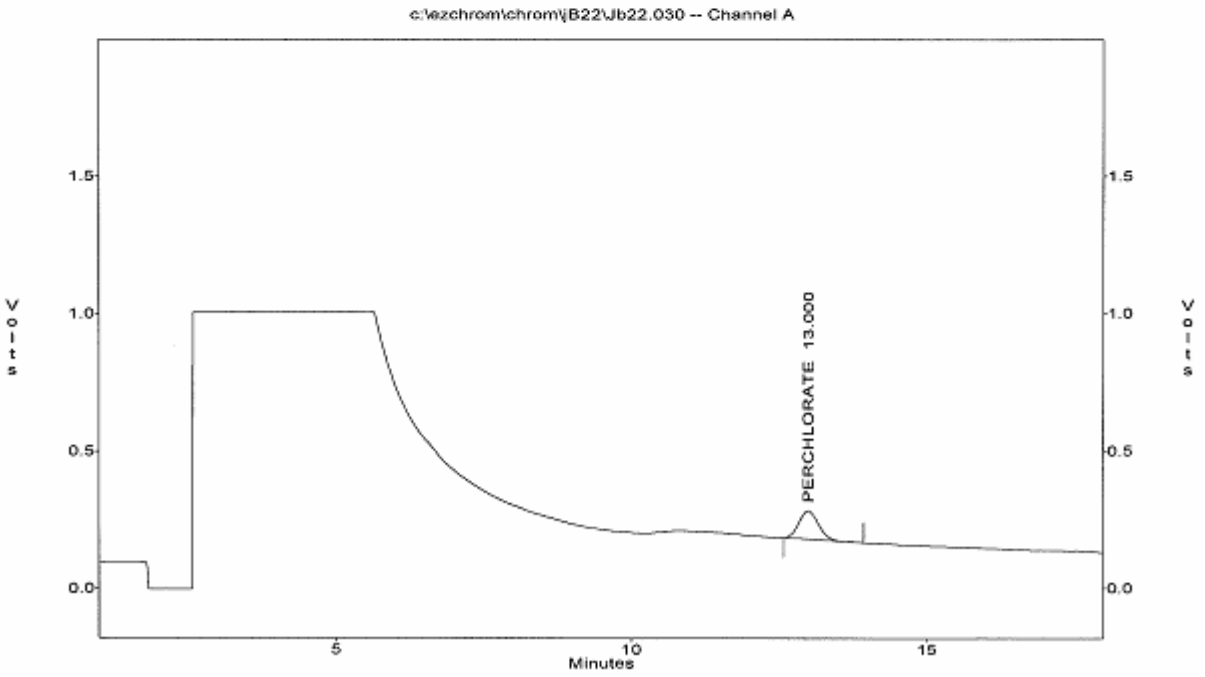
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.030
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-04
Acquired : Feb 23, 2022 02:29:35
Printed : Feb 23, 2022 02:50:36
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.00	2380012	103025	171880.766	13.391



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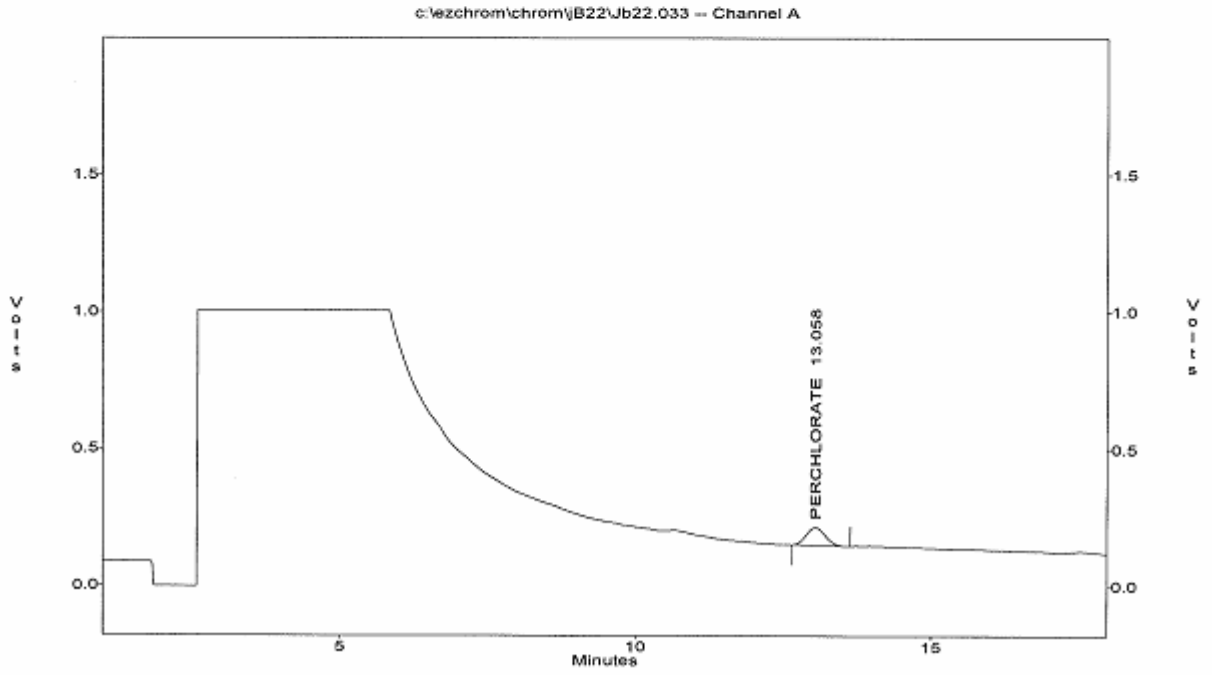
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.033
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-05
Acquired : Feb 23, 2022 03:32:39
Printed : Feb 23, 2022 03:53:40
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.06	1449343	65170	171880.766	8.297



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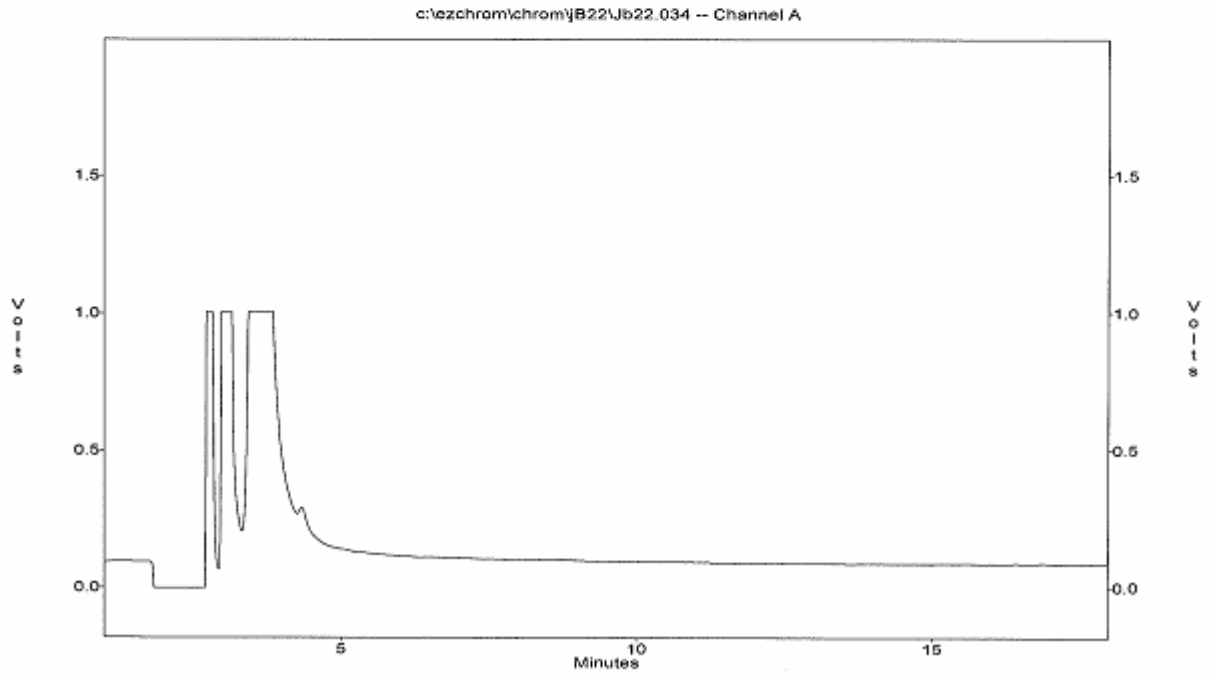
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.034
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-06
Acquired : Feb 23, 2022 03:53:40
Printed : Feb 23, 2022 04:14:41
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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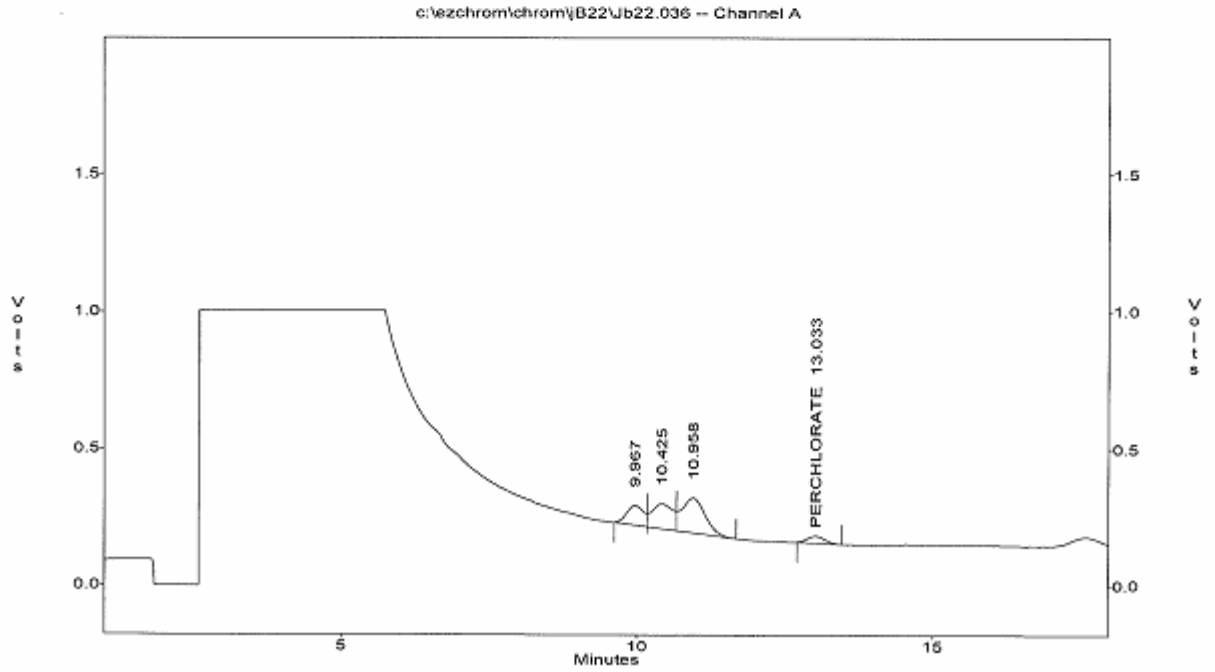
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.036
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-07
Acquired : Feb 23, 2022 04:35:43
Printed : Feb 23, 2022 04:56:44
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
4	PERCHLORATE	13.03	523493	25610	171880.766	3.229



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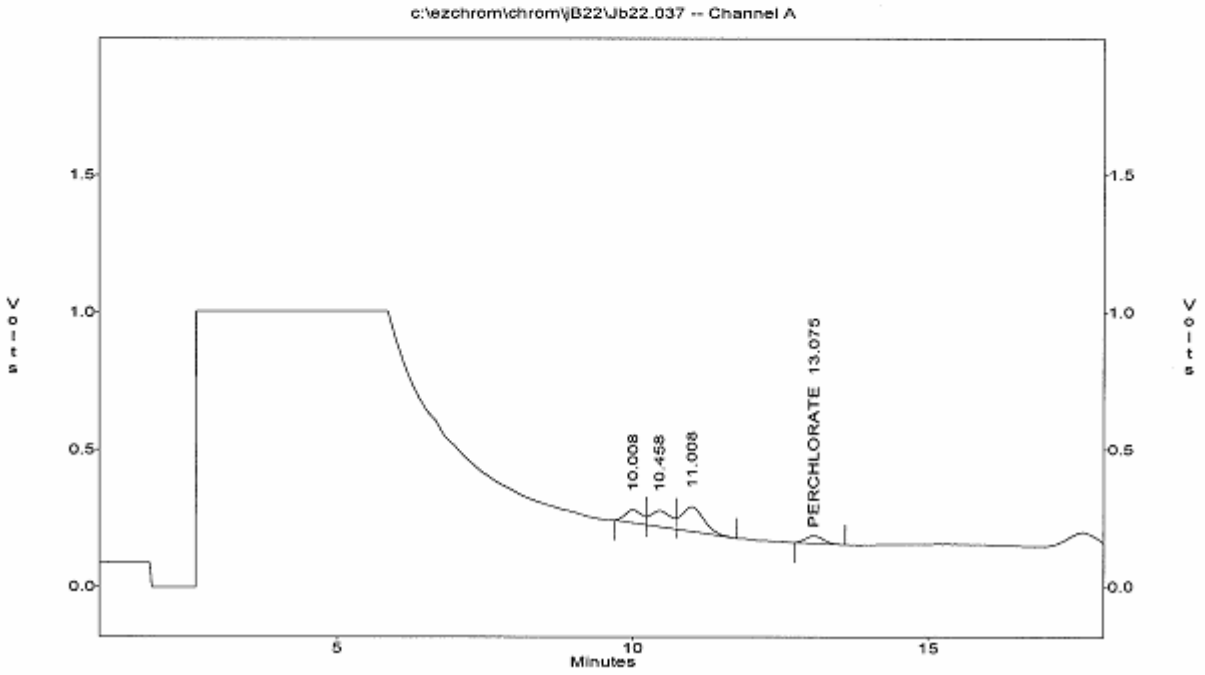
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.037
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-08
Acquired : Feb 23, 2022 04:56:44
Printed : Feb 23, 2022 05:17:45
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
4	PERCHLORATE	13.07	568655	27564	171880.766	3.476



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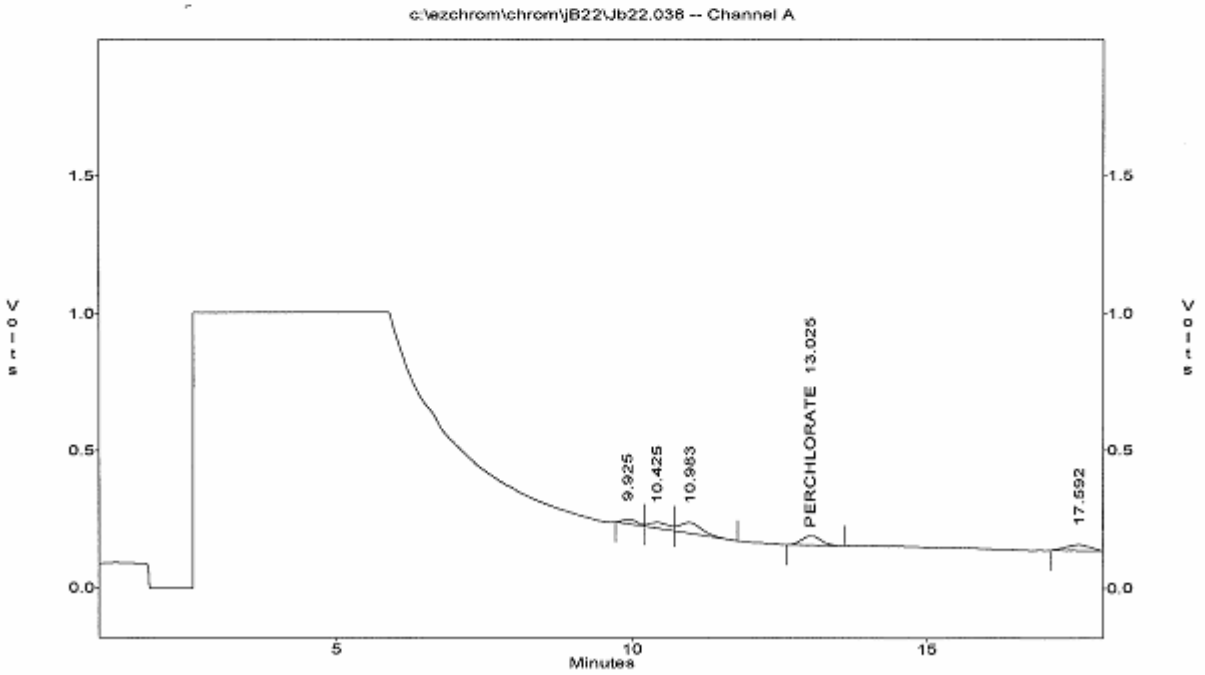
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.038
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-09
Acquired : Feb 23, 2022 05:17:46
Printed : Feb 23, 2022 05:38:47
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
4	PERCHLORATE	13.02	764287	33207	171880.766	4.547



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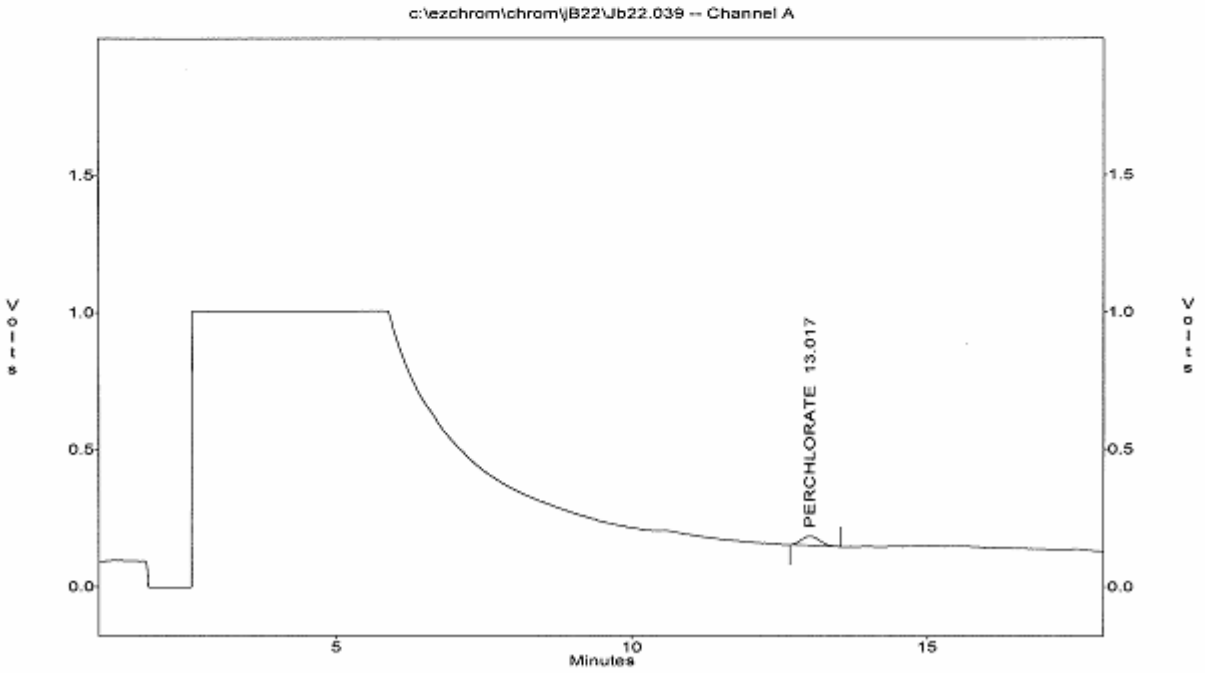
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.039
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-10
Acquired : Feb 23, 2022 05:38:47
Printed : Feb 23, 2022 05:59:48
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.02	721952	33758	171880.766	4.316



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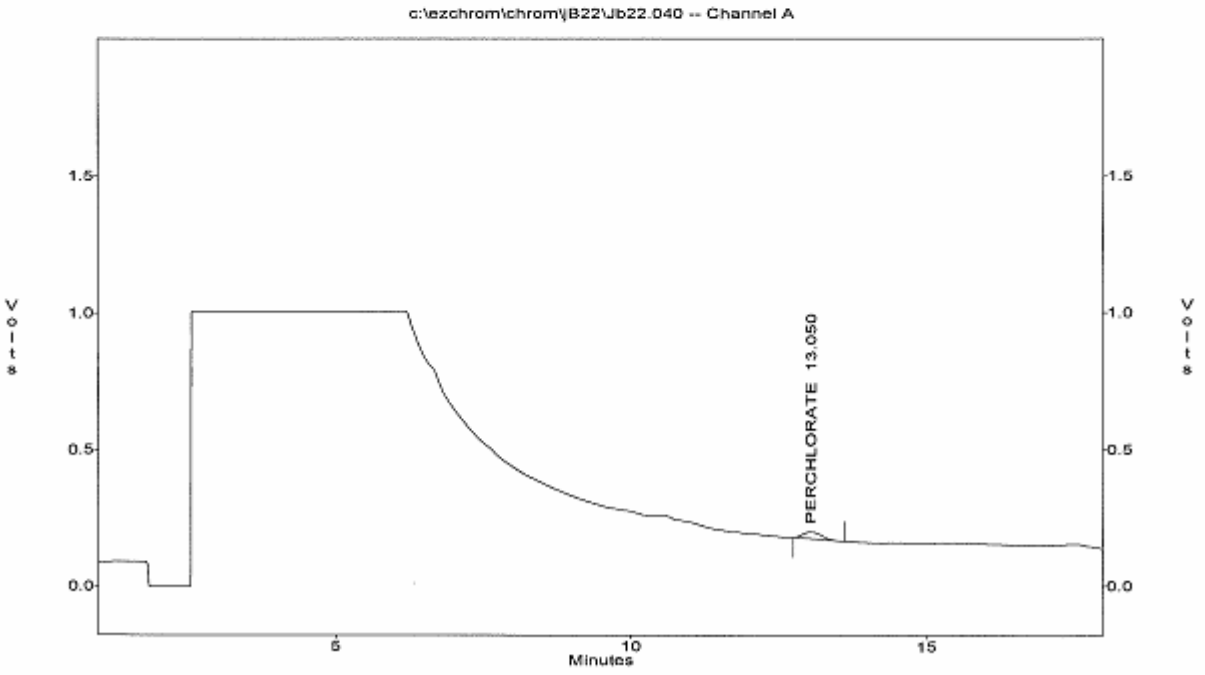
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.040
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-11
Acquired : Feb 23, 2022 05:59:48
Printed : Feb 23, 2022 06:20:50
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.05	550604	25303	171880.766	3.378



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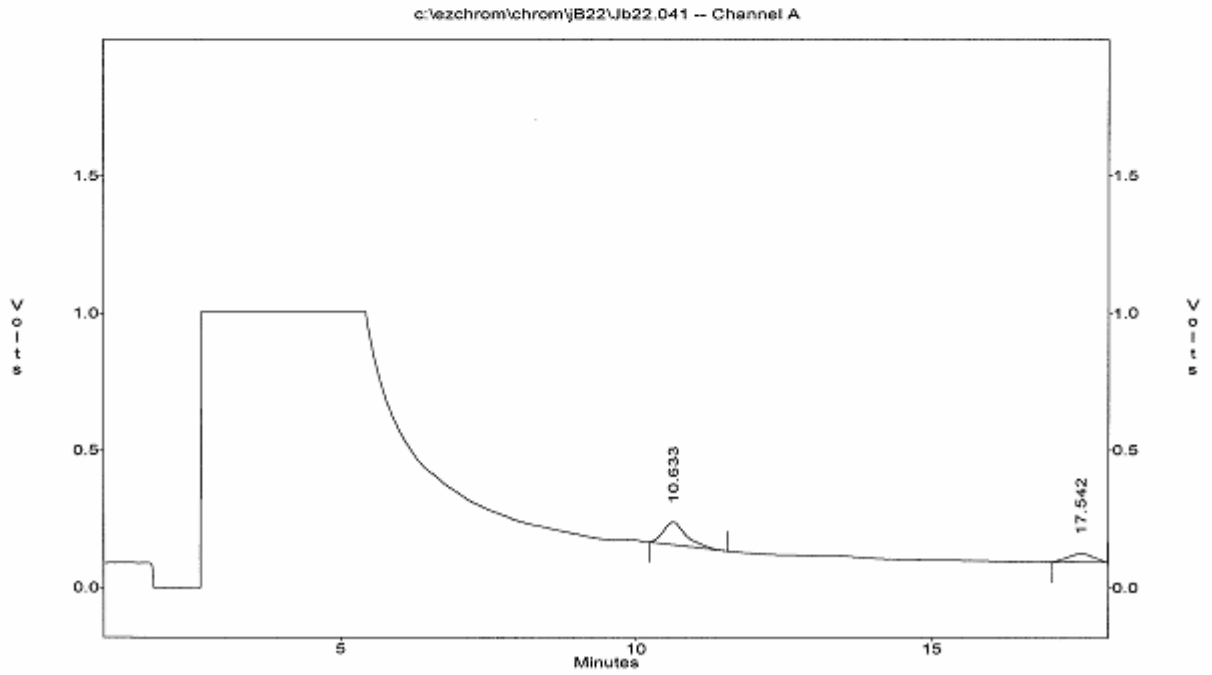
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.041
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B207-12
Acquired : Feb 23, 2022 06:20:50
Printed : Feb 23, 2022 06:41:51
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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QC SUMMARIES

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EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : PACE ANALYTICAL
PROJECT : 2202145
BATCH NO. : 226207
METHOD : E314.0

MATRIX : WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID :	MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID :	PCB001WB	PCB001WL	PCB001WC
LAB FILE ID :	22JB22011	22JB22013	22JB22014
DATE PREPARED :	NA	NA	NA
DATE ANALYZED :	02/22/2219:43	02/22/2220:27	02/22/2220:53
PREP BATCH :	PCB001W	PCB001W	PCB001W
CALIBRATION REF:	22JB22010	22JB22010	22JB22010

ACCESSION:

PARAMETER	MB RESULT (ug/L)	SPIKE AMT (ug/L)	BS RESULT (ug/L)	BS REC (%)	SPIKE AMT (ug/L)	BSD RESULT (ug/L)	BSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Perchlorate	ND	25	25.6	102	25	25.4	102	1	85-115	15

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EMAX QUALITY CONTROL DATA
SAMPLE DUPLICATE ANALYSIS

CLIENT : PACE ANALYTICAL
PROJECT : 2202145
BATCH NO. : 22B207
METHOD : E314.0

MATRIX	: WATER	
DILUTION FACTOR	: 1	1
SAMPLE ID	: 2202145-05	2202145-05DUP
LAB SAMPLE ID	: B207-04	B207-04D
LAB FILE ID	: 22JB22030	22JB22031
DATE PREPARED	: NA	NA
DATE ANALYZED	: 02/23/2202:29	02/23/2202:50
PREP BATCH	: PCB001W	PCB001W
CALIBRATION REF	: 22JB22026	22JB22026

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	DUP RESULT (ug/L)	RPD (%)	MAX RPD (%)
Perchlorate	13.4	13.6	1	15

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EMAX QUALITY CONTROL DATA
MATRIX SPIKE ANALYSIS

CLIENT : PACE ANALYTICAL
PROJECT : 2202145
BATCH NO. : 22B207
METHOD : E314.0

MATRIX	: WATER	% MOISTURE: NA
DILUTION FACTOR:	1	1
SAMPLE ID	: 2202145-05	2202145-05MS
LAB SAMPLE ID	: B207-04	B207-04M
LAB FILE ID	: 22JB22030	22JB22032
DATE PREPARED	: NA	NA
DATE ANALYZED	: 02/23/2202:29	02/23/2203:11
PREP BATCH	: PCB001W	PCB001W
CALIBRATION REF:	22JB22026	22JB22026

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	SPIKE AMT (ug/L)	MS RESULT (ug/L)	MS REC (%)	QC LIMIT (%)
Perchlorate	13.4	15.00	30.0	111	80-120

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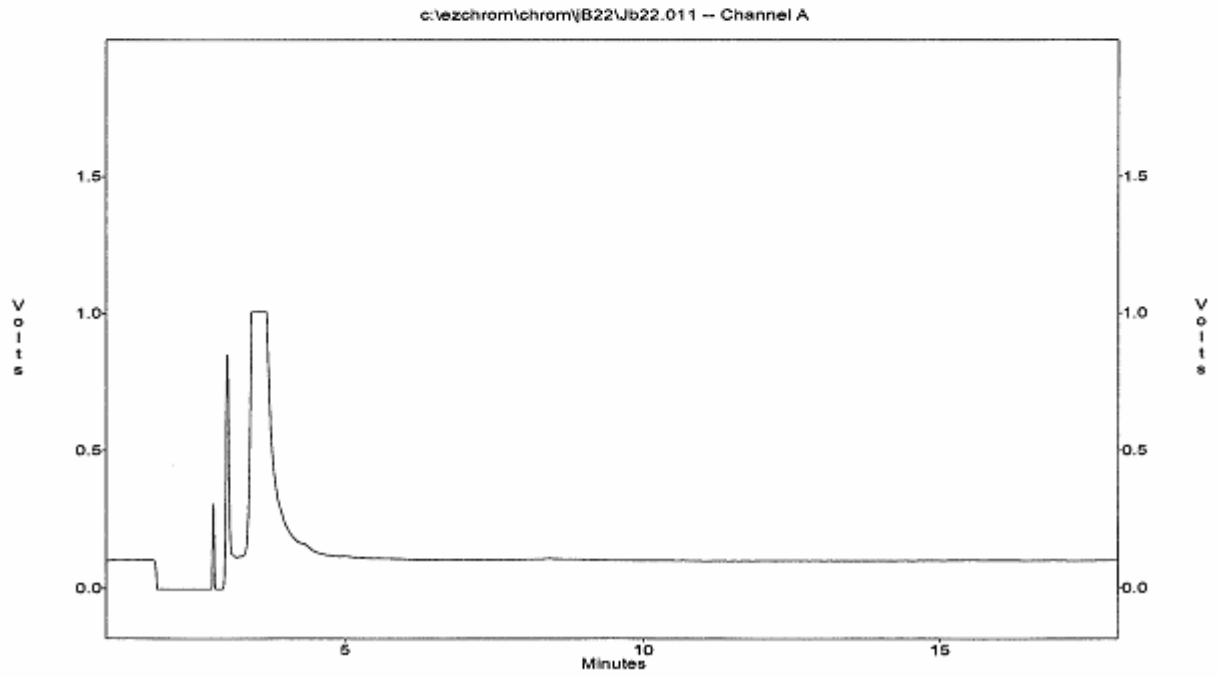
QC DATA

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.011
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : PCB001WB
Acquired : Feb 22, 2022 19:43:38
Printed : Feb 22, 2022 20:04:39
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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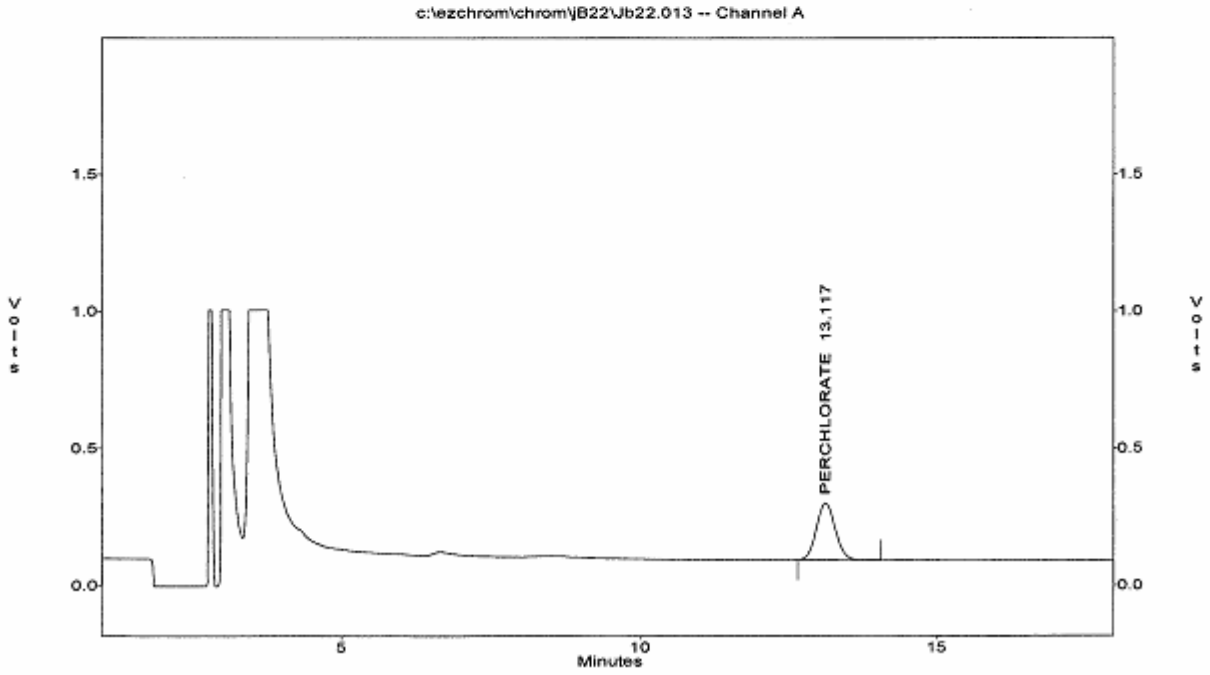
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.013
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : PCB001WL
Acquired : Feb 22, 2022 20:27:11
Printed : Feb 22, 2022 20:48:12
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)	A/H
1	PERCHLORATE	13.12	4608443	208027	171880.766	25.589	22.153

$$PD_{A/H} = \frac{|25.468 - 22.153|}{22.153} \times 100 = 15\%$$



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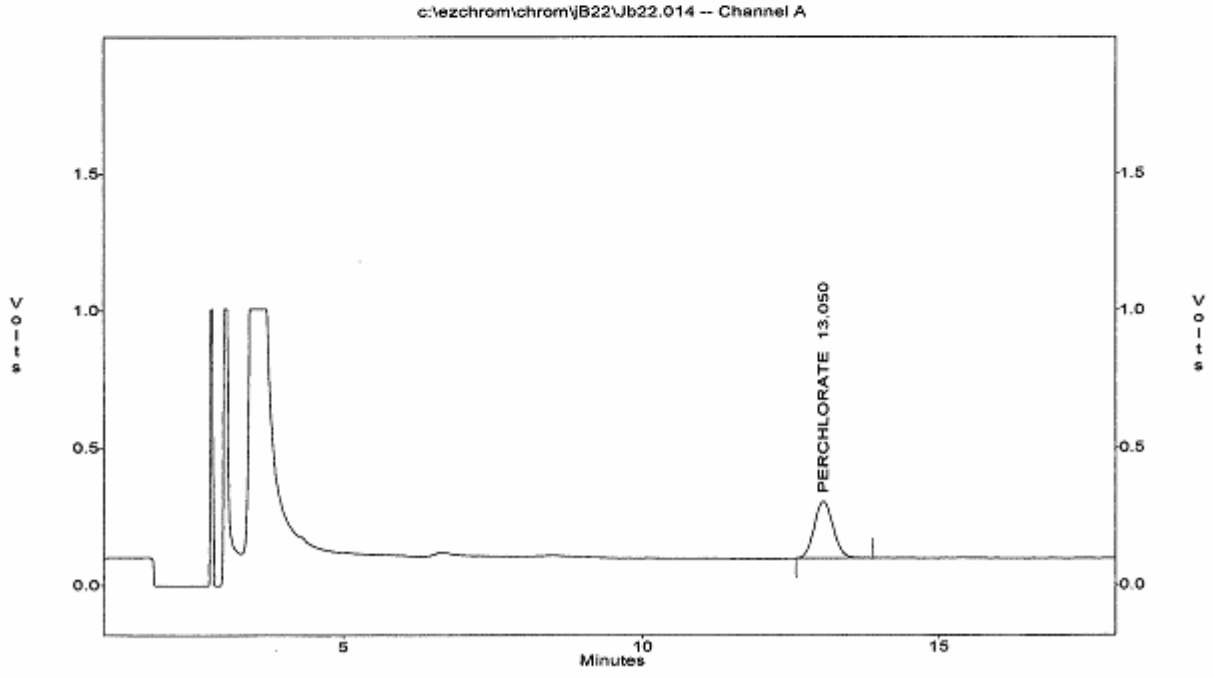
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.014
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : PCB001WC
Acquired : Feb 22, 2022 20:53:09
Printed : Feb 22, 2022 21:14:11
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.05	4567930	207111	171880.766	25.368



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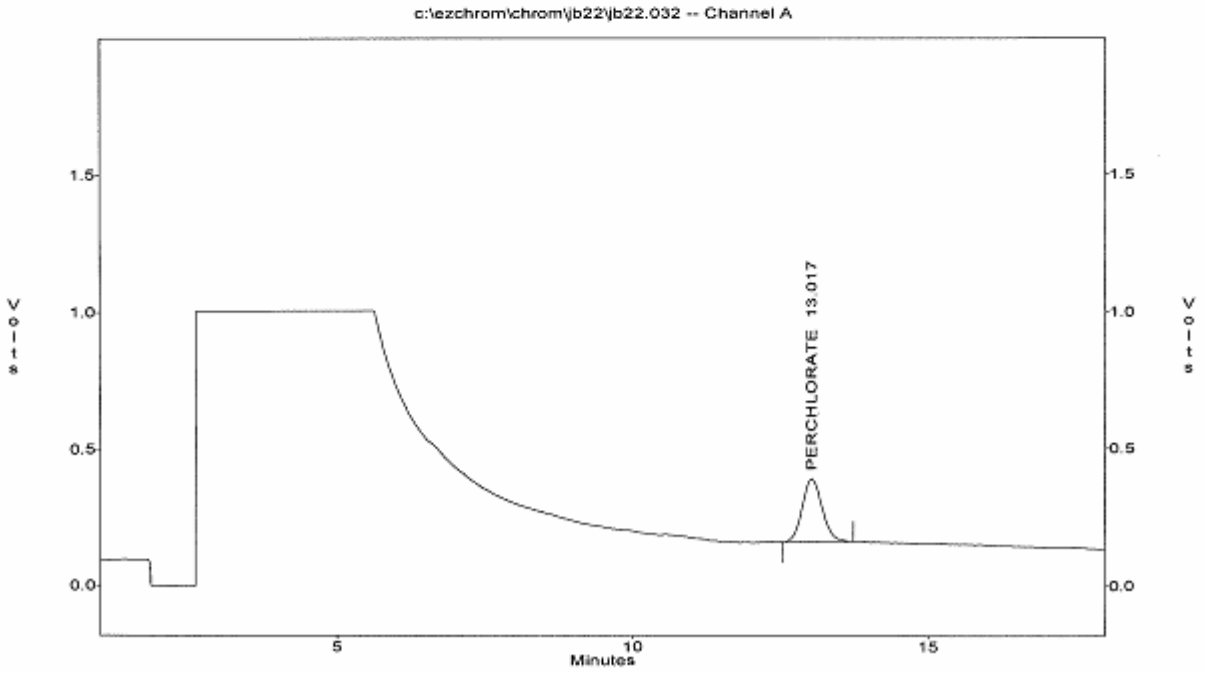
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.032
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : B207-04M
Acquired : Feb 23, 2022 03:11:38
Printed : Feb 23, 2022 08:31:51
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.02	5405900	229827	171880.766	29.954



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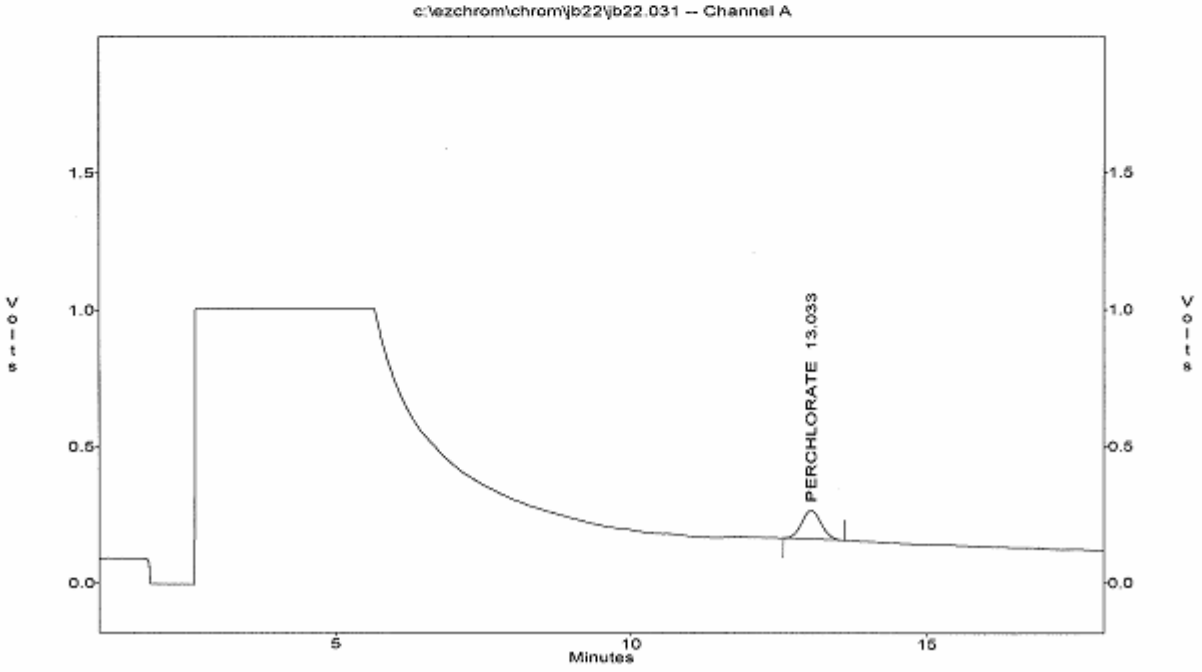
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.031
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : B207-04D
Acquired : Feb 23, 2022 02:50:36
Printed : Feb 23, 2022 08:30:32
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.03	2410542	104717	171880.766	13.558



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INITIAL CALIBRATION

IC SEQ FORM (ESD)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
JB22001	IB	P	IC57B22	02/22/2215:17	1
JB22002	S0	P	IC57B22	02/22/2215:39	1
JB22003	S1	P	IC57B22	02/22/2216:02	1
JB22004	S2	P	IC57B22	02/22/2216:24	1
JB22005	S3	P	IC57B22	02/22/2216:46	1
JB22006	S4	P	IC57B22	02/22/2217:07	1
JB22007	S5	P	IC57B22	02/22/2217:29	1
JB22008	ICV	P	IC57B22	02/22/2218:11	1
JB22009	ICB	P	IC57B22	02/22/2218:35	1

IC57B22.MET

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IC RESULT FORM CalVersion: PCHL0314.022/JB22(2022)

LFID	LSID	SELCOMP	PERCHLORATE	DateTime	Df
JB22001	IB	P	.000	02/22/2215:17	1
JB22002	S0	P	.000	02/22/2215:39	1
JB22003	S1	P	2	02/22/2216:02	1
JB22004	S2	P	4	02/22/2216:24	1
JB22005	S3	P	10	02/22/2216:46	1
JB22006	S4	P	25	02/22/2217:07	1
JB22007	S5	P	30	02/22/2217:29	1
JB22008	ICV	P	101%	02/22/2218:11	1
JB22009	ICB	P	.000	02/22/2218:35	1

IC57822.MET

2/24/22

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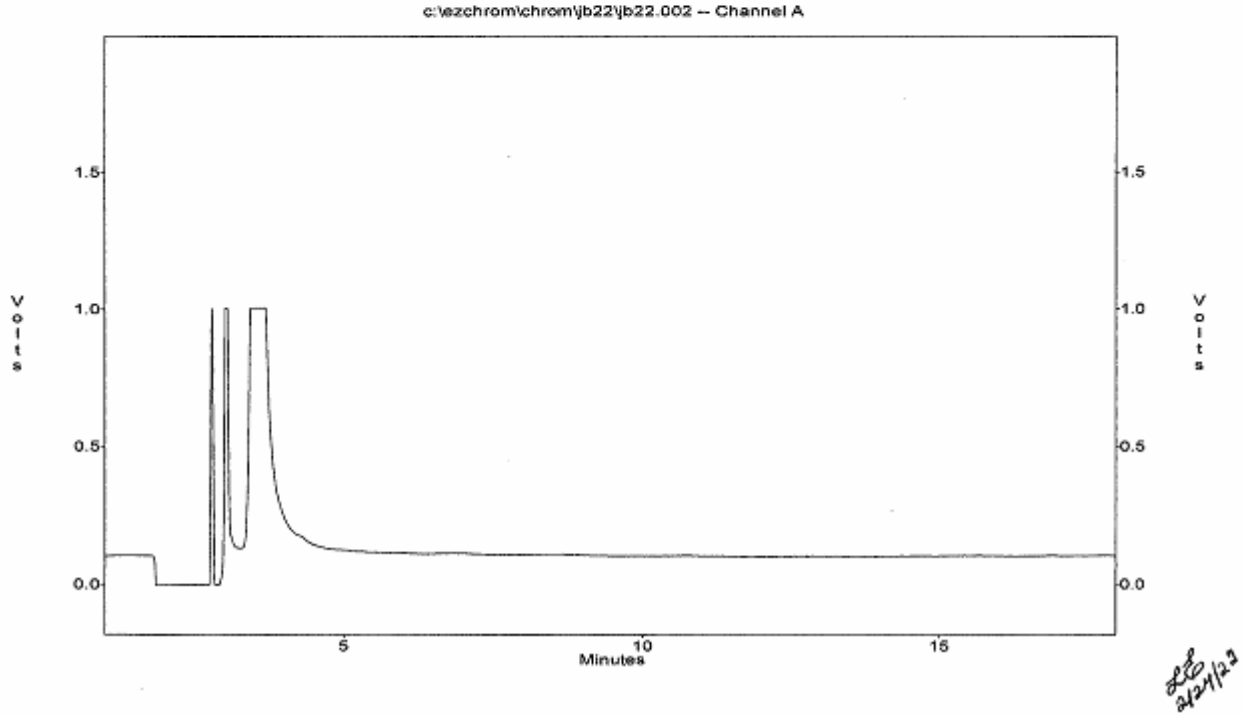
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.002
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S0
Acquired : Feb 22, 2022 15:39:54
Printed : Feb 22, 2022 20:34:23
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



2/24/23

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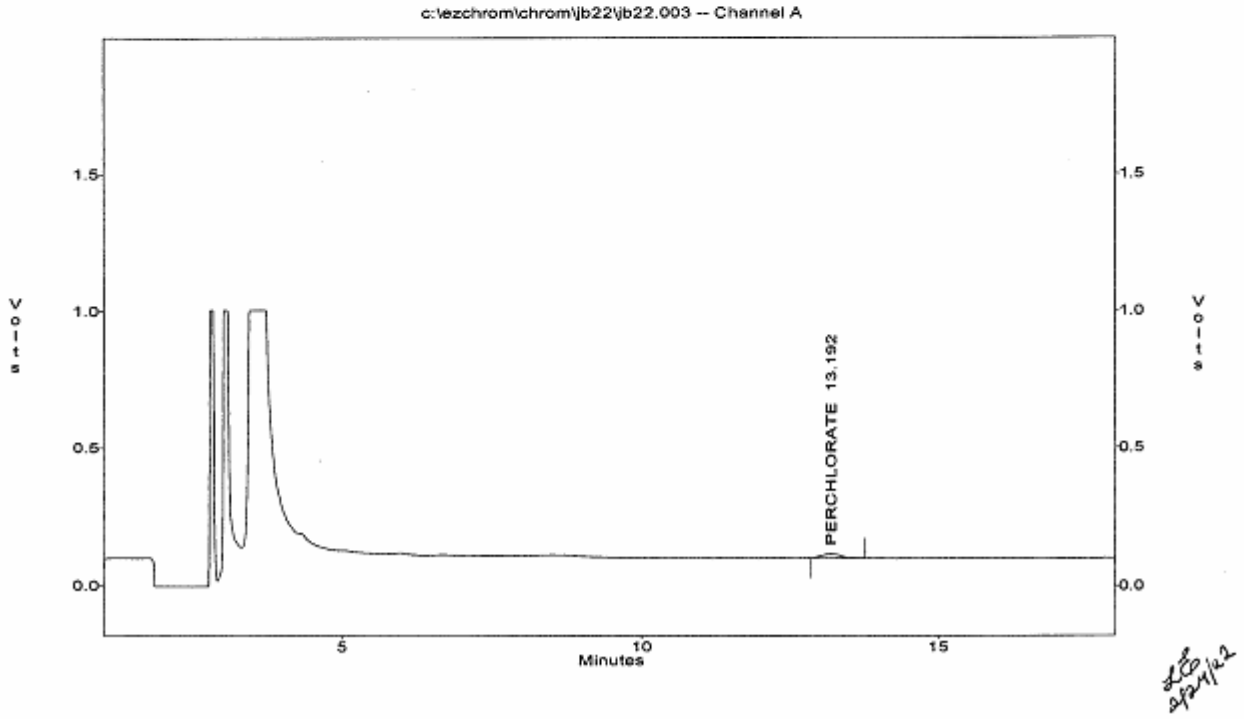
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.003
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S1
Acquired : Feb 22, 2022 16:02:53
Printed : Feb 22, 2022 20:34:41
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.19	314112	14924	171880.766	2.000



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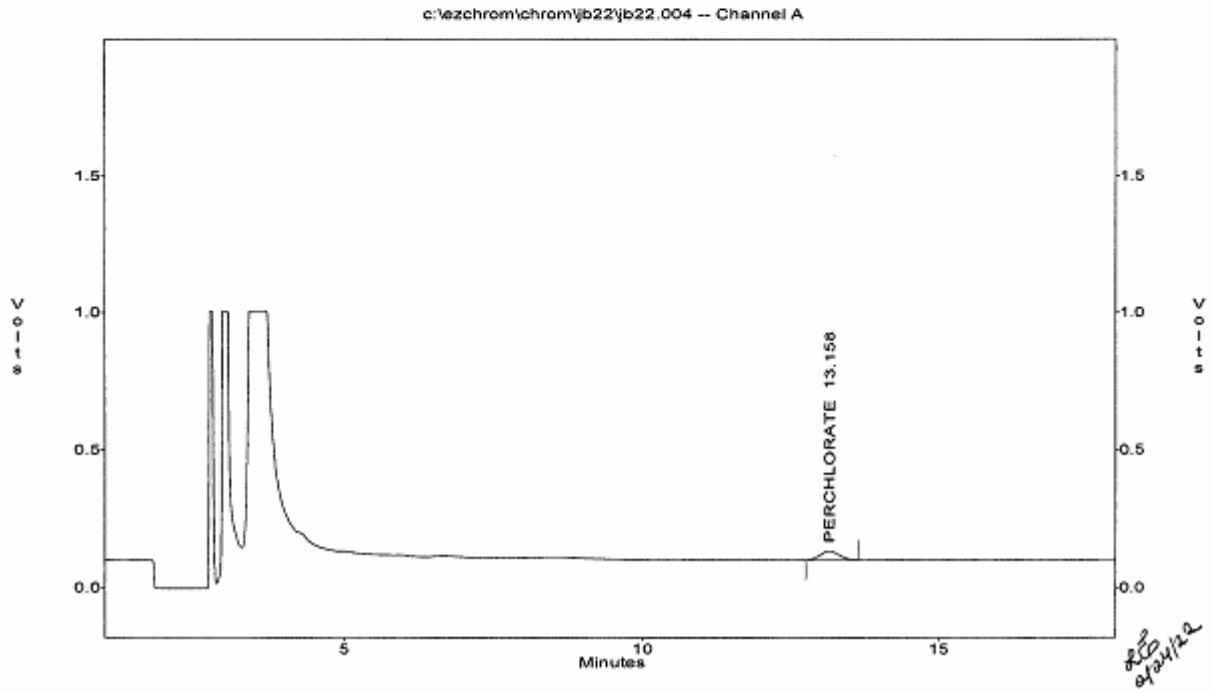
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.004
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S2
Acquired : Feb 22, 2022 16:24:31
Printed : Feb 22, 2022 20:34:55
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.16	676753	30740	171880.766	4.000



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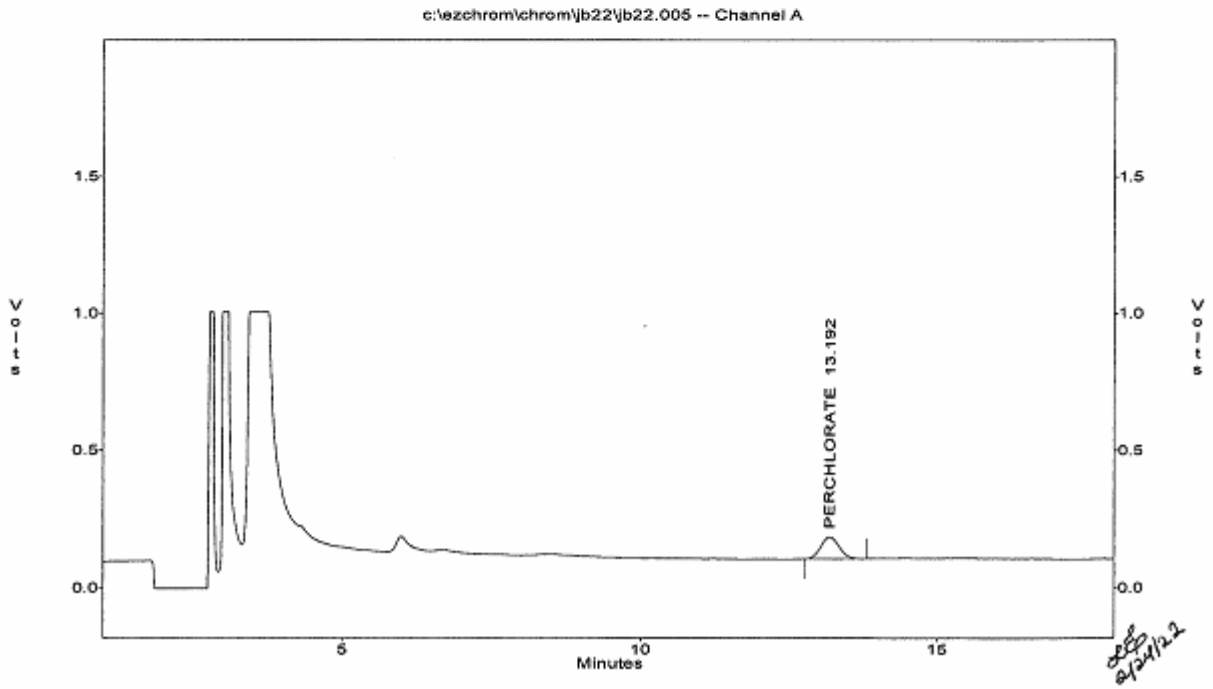
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.005
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S3
Acquired : Feb 22, 2022 16:46:11
Printed : Feb 22, 2022 20:35:13
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.19	1723326	78581	171880.766	10.000



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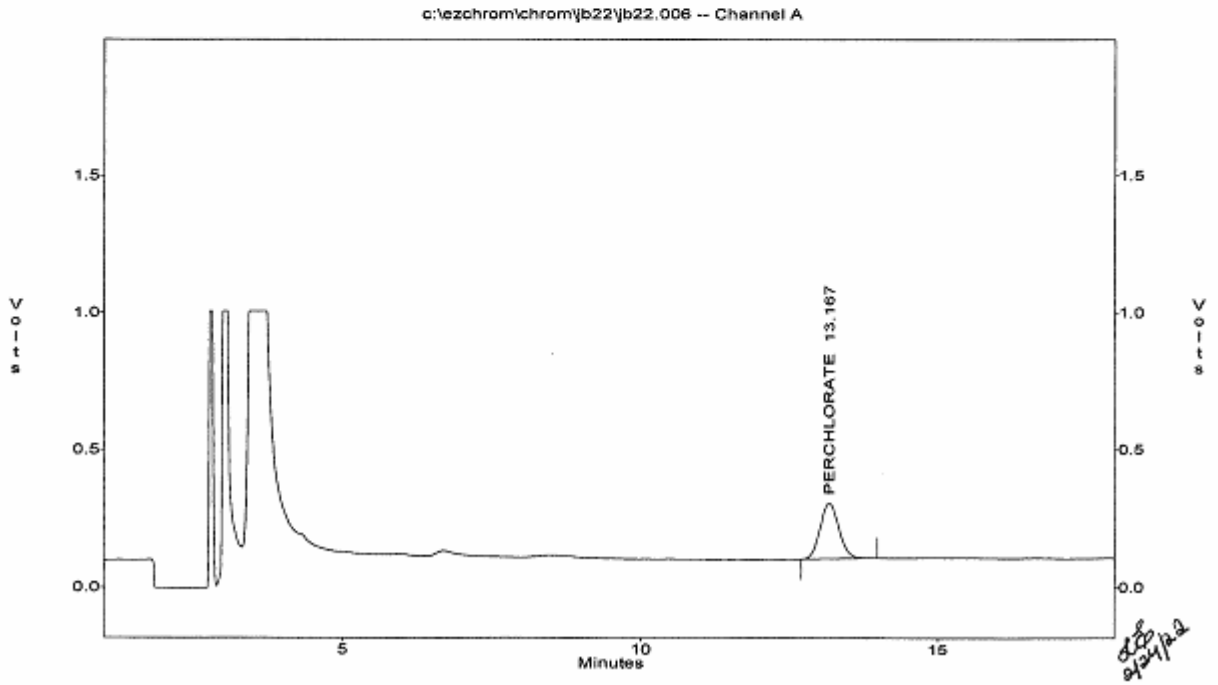
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.006
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S4
Acquired : Feb 22, 2022 17:07:43
Printed : Feb 22, 2022 20:35:27
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.17	4501513	201196	171880.766	25.000



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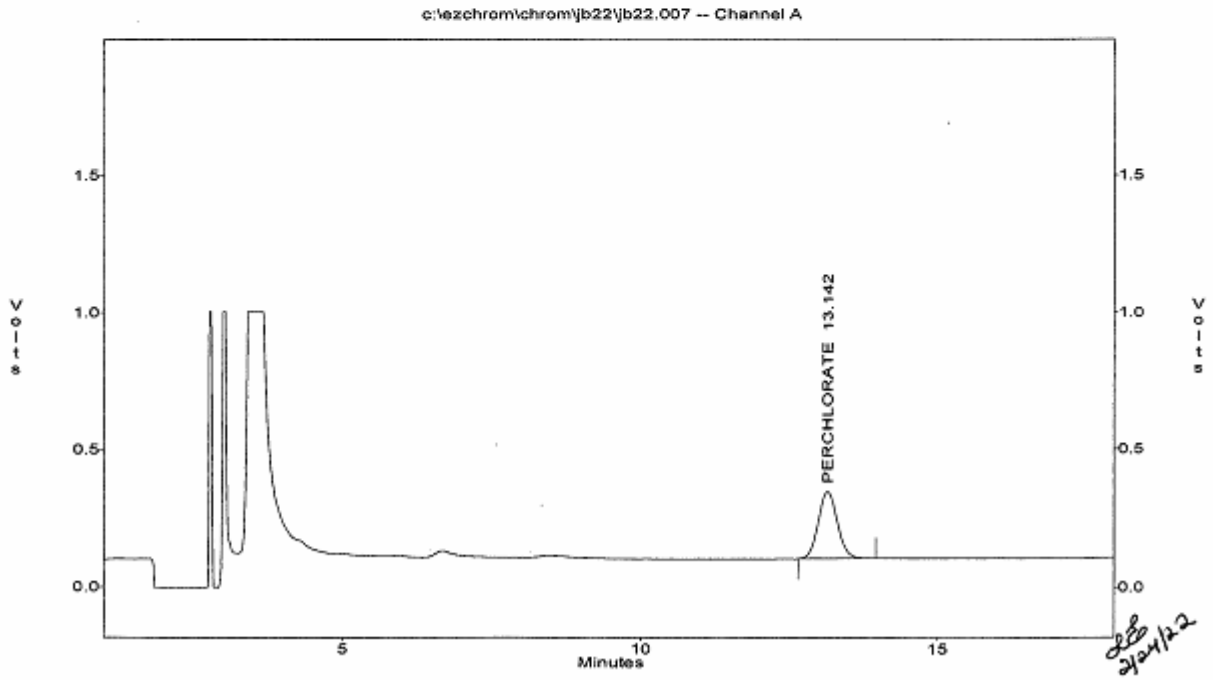
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.007
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S5
Acquired : Feb 22, 2022 17:29:59
Printed : Feb 22, 2022 20:35:39
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.14	5422993	242055	171880.766	30.000



REPORT ID: 22B207

Method : c:\ezchrom\methods\ic57b22.met
Printed : Feb 22, 2022 20:37:06
Channel : A
Peak : PERCHLORATE

* - Replicate Not Used

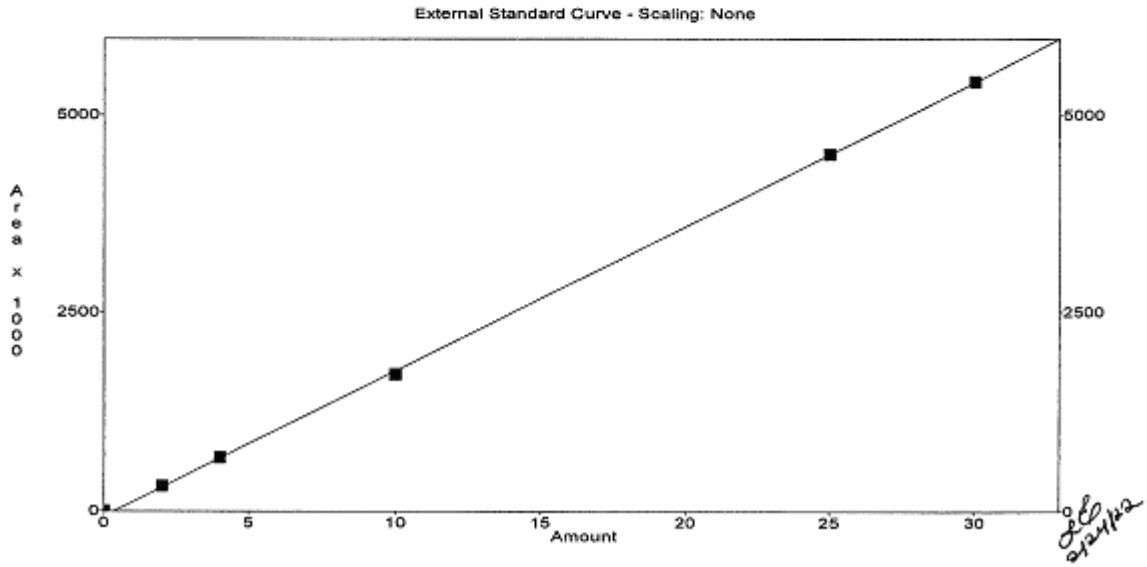
Level	Area	Amount	RF	Rep Area 1	Rep Area 2	Rep Area 3	Rep Area 4	Rep Area 5	Replic STD	Replic %RSD	Old Area
2	314112	2	157056.00	314112							0
3	676753	4	169188.25	676753							0
4	1723326	10	172332.59	1723326							0
5	4501513	25	180060.52	4501513							0
6	5422993	30	180766.44	5422993							0

Calib Flag: Replace

Average RF: 171881
RF StdDev: 9657.78
RF %RSD: 5.619

RF Definition: Area / Amount
Weighting Method: None
Fit Through Zero: No

Linear Fit: Amount = 5.47377e-006 x Area + 0.363742
R^2 = 0.999913



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SECOND SOURCE VERIFICATION

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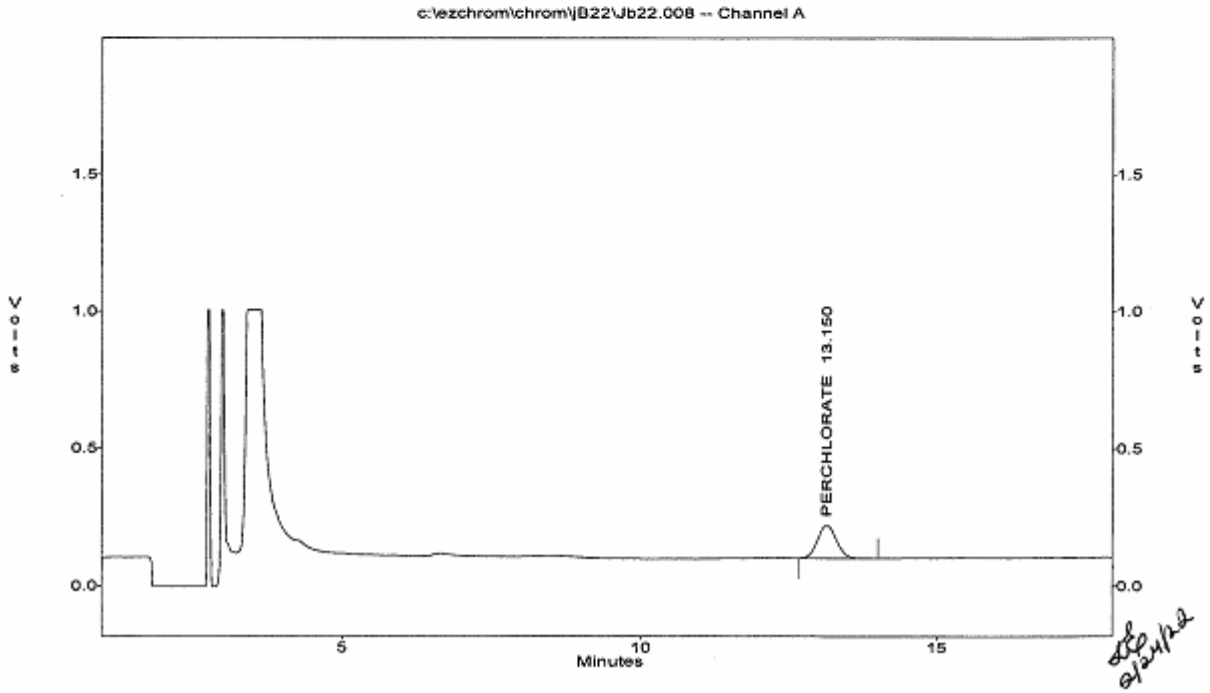
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.008
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : ICV
Acquired : Feb 22, 2022 18:11:46
Printed : Feb 22, 2022 18:32:47
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.15	2710563	121104	171880.766	15.201



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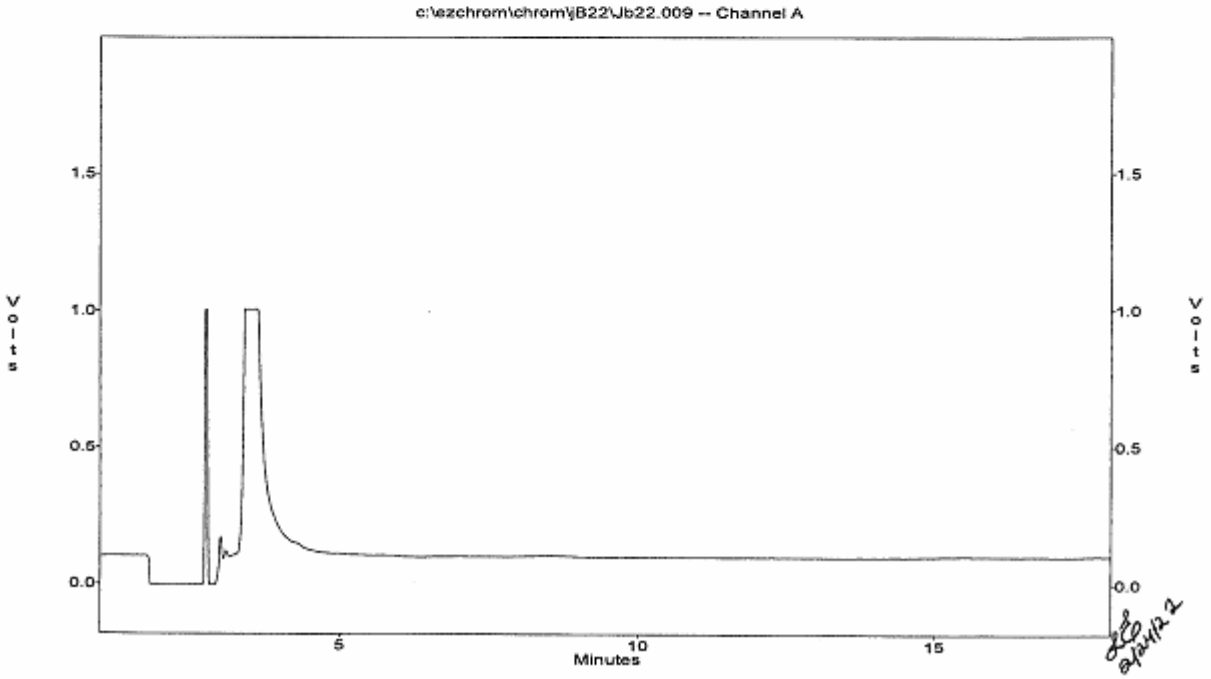
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.009
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : ICB
Acquired : Feb 22, 2022 18:35:45
Printed : Feb 22, 2022 18:56:46
User : JChun

Channel A Results

#	Peak Name	R.T. (min)	AREA	HEIGHT	Ave. CF	ESTD Conc. (ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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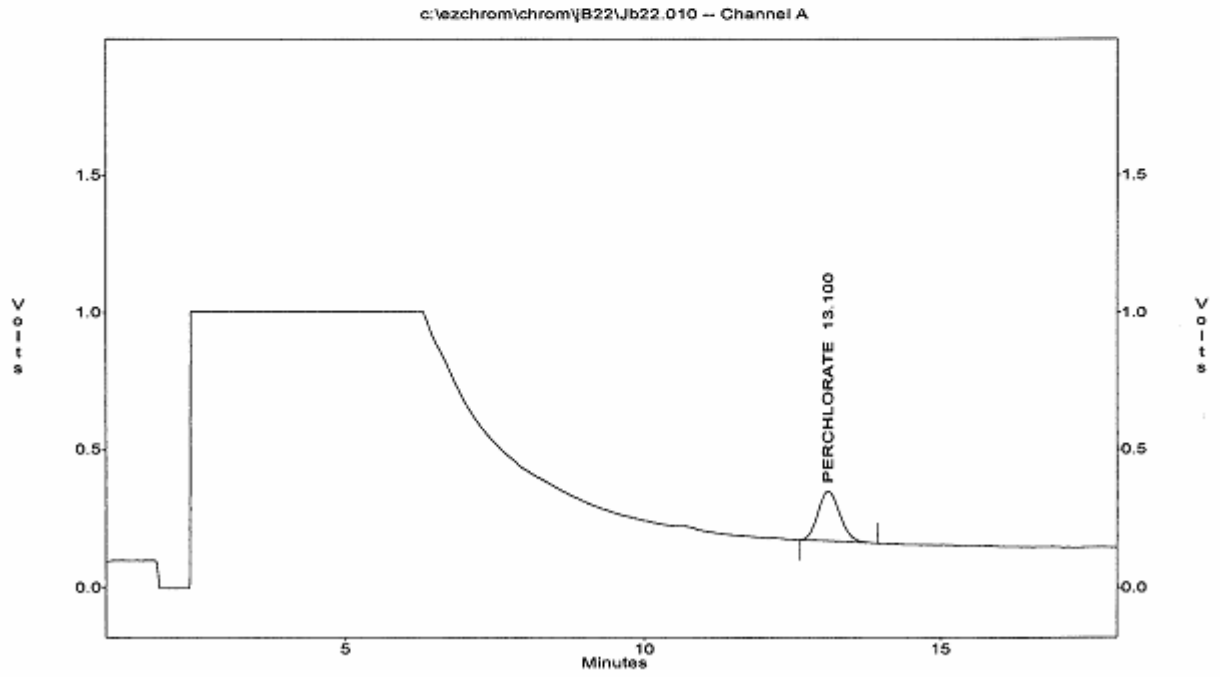
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.010
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : IPCS 300/25
Acquired : Feb 22, 2022 19:21:34
Printed : Feb 22, 2022 19:42:36
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.10	4559226	179019	171880.766	25.320

A/H
25.468



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DAILY CALIBRATIONS

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Continuing Calibration Summary Form

Client : PACE ANALYTICAL
Project : 2202145
SDG : 22B207
Method : METHOD E314.0
Parameter: Perchlorate

LFID	LSID	%Rec	AnalysisDateTime
22JB22015	CCV1-15	100	02/22/2221:14
22JB22026	CCV2-30	106	02/23/2201:05
22JB22035	CCV3-15	103	02/23/2204:14
22JB22042	CCV4-30	105	02/23/2206:41

IPCS Acceptance Criteria: 80-120%
CCV Acceptance Criteria: 85-115%

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IC SEQ FORM (ESD)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
JB22001	IB	P	IC57B22	02/22/2215:17	1
JB22002	S0	P	IC57B22	02/22/2215:39	1
JB22003	S1	P	IC57B22	02/22/2216:02	1
JB22004	S2	P	IC57B22	02/22/2216:24	1
JB22005	S3	P	IC57B22	02/22/2216:46	1
JB22006	S4	P	IC57B22	02/22/2217:07	1
JB22007	S5	P	IC57B22	02/22/2217:29	1
JB22008	ICV	P	IC57B22	02/22/2218:11	1
JB22009	ICB	P	IC57B22	02/22/2218:35	1
JB22010	IPCS	P	IC57B22	02/22/2219:21	1
JB22011	PCB001WB	P	IC57B22	02/22/2219:43	1
JB22012	MRL82201	P	IC57B22	02/22/2220:05	1
JB22013	PCB001WL	P	IC57B22	02/22/2220:27	1
JB22014	PCB001WC	P	IC57B22	02/22/2220:53	1
JB22015	CCV1-15	P	IC57B22	02/22/2221:14	1
JB22016	B031-08I	P	IC57B22	02/22/2221:35	2
JB22017	B206-01	P	IC57B22	02/22/2221:56	1
JB22018	B206-01D	P	IC57B22	02/22/2222:17	1
JB22019	B206-01M	P	IC57B22	02/22/2222:38	1
JB22020	B206-02	P	IC57B22	02/22/2222:59	1
JB22021	B206-03	P	IC57B22	02/22/2223:20	1
JB22022	B206-04	P	IC57B22	02/22/2223:41	1
JB22023	B206-05	P	IC57B22	02/23/2200:02	1
JB22024	B206-06	P	IC57B22	02/23/2200:23	1
JB22025	B206-07	P	IC57B22	02/23/2200:44	1
JB22026	CCV2-30	P	IC57B22	02/23/2201:05	1
JB22027	B207-01	P	IC57B22	02/23/2201:26	1
JB22028	B207-02	P	IC57B22	02/23/2201:47	1
JB22029	B207-03	P	IC57B22	02/23/2202:08	1
JB22030	B207-04	P	IC57B22	02/23/2202:29	1
JB22031	B207-04D	P	IC57B22	02/23/2202:50	1
JB22032	B207-04M	P	IC57B22	02/23/2203:11	1
JB22033	B207-05	P	IC57B22	02/23/2203:32	1
JB22034	B207-06	P	IC57B22	02/23/2203:53	1
JB22035	CCV3-15	P	IC57B22	02/23/2204:14	1
JB22036	B207-07	P	IC57B22	02/23/2204:35	1
JB22037	B207-08	P	IC57B22	02/23/2204:56	1
JB22038	B207-09	P	IC57B22	02/23/2205:17	1
JB22039	B207-10	P	IC57B22	02/23/2205:38	1
JB22040	B207-11	P	IC57B22	02/23/2205:59	1
JB22041	B207-12	P	IC57B22	02/23/2206:20	1
JB22042	CCV4-30	P	IC57B22	02/23/2206:41	1

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IC RESULT FORM CalVersion: PCHLO314.B22/JB22(2022)

LFID	LSID	SELCOMP	PERCHLORATE	DateTime	Df
JB22001	IB	P	.000	02/22/2215:17	1
JB22002	S0	P	.000	02/22/2215:39	1
JB22003	S1	P	2	02/22/2216:02	1
JB22004	S2	P	4	02/22/2216:24	1
JB22005	S3	P	10	02/22/2216:46	1
JB22006	S4	P	25	02/22/2217:07	1
JB22007	S5	P	30	02/22/2217:29	1
JB22008	ICV	P	101%	02/22/2218:11	1
JB22009	ICB	P	.000	02/22/2218:35	1
JB22010	IPCS	P	101%	02/22/2219:21	1
JB22011	PCB001WB	P	.000	02/22/2219:43	1
JB22012	MRLB2201	P	103%	02/22/2220:05	1
JB22013	PCB001WL	P	25.6	02/22/2220:27	1
JB22014	PCB001WC	P	25.4	02/22/2220:53	1
JB22015	CCV1-15	P	100%	02/22/2221:14	1
JB22016	B031-08I	P	19.7	02/22/2221:35	2
JB22017	B206-01	P	.000	02/22/2221:56	1
JB22018	B206-01D	P	.000	02/22/2222:17	1
JB22019	B206-01M	P	15.4	02/22/2222:38	1
JB22020	B206-02	P	.000	02/22/2222:59	1
JB22021	B206-03	P	.000	02/22/2223:20	1
JB22022	B206-04	P	.000	02/22/2223:41	1
JB22023	B206-05	P	.000	02/23/2200:02	1
JB22024	B206-06	P	.000	02/23/2200:23	1
JB22025	B206-07	P	.000	02/23/2200:44	1
JB22026	CCV2-30	P	106%	02/23/2201:05	1
JB22027	B207-01	P	.000	02/23/2201:26	1
JB22028	B207-02	P	9.51	02/23/2201:47	1
JB22029	B207-03	P	11.4	02/23/2202:08	1
JB22030	B207-04	P	13.4	02/23/2202:29	1
JB22031	B207-04D	P	13.6	02/23/2202:50	1
JB22032	B207-04M	P	30	02/23/2203:11	1
JB22033	B207-05	P	8.3	02/23/2203:32	1
JB22034	B207-06	P	.000	02/23/2203:53	1
JB22035	CCV3-15	P	103%	02/23/2204:14	1
JB22036	B207-07	P	3.23	02/23/2204:35	1
JB22037	B207-08	P	3.48	02/23/2204:56	1
JB22038	B207-09	P	4.55	02/23/2205:17	1
JB22039	B207-10	P	4.32	02/23/2205:38	1
JB22040	B207-11	P	3.38	02/23/2205:59	1
JB22041	B207-12	P	.000	02/23/2206:20	1
JB22042	CCV4-30	P	105%	02/23/2206:41	1

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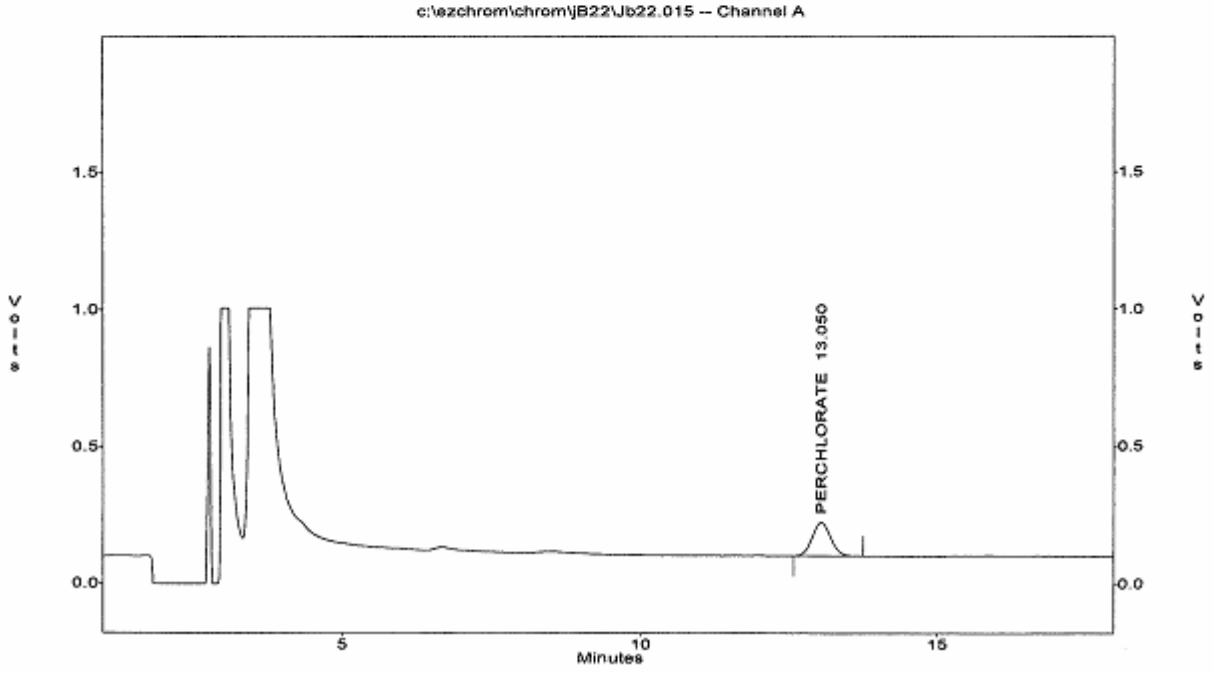
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.015
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : CCV1-15
Acquired : Feb 22, 2022 21:14:11
Printed : Feb 22, 2022 21:35:12
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.05	2676628	121476	171880.766	15.015



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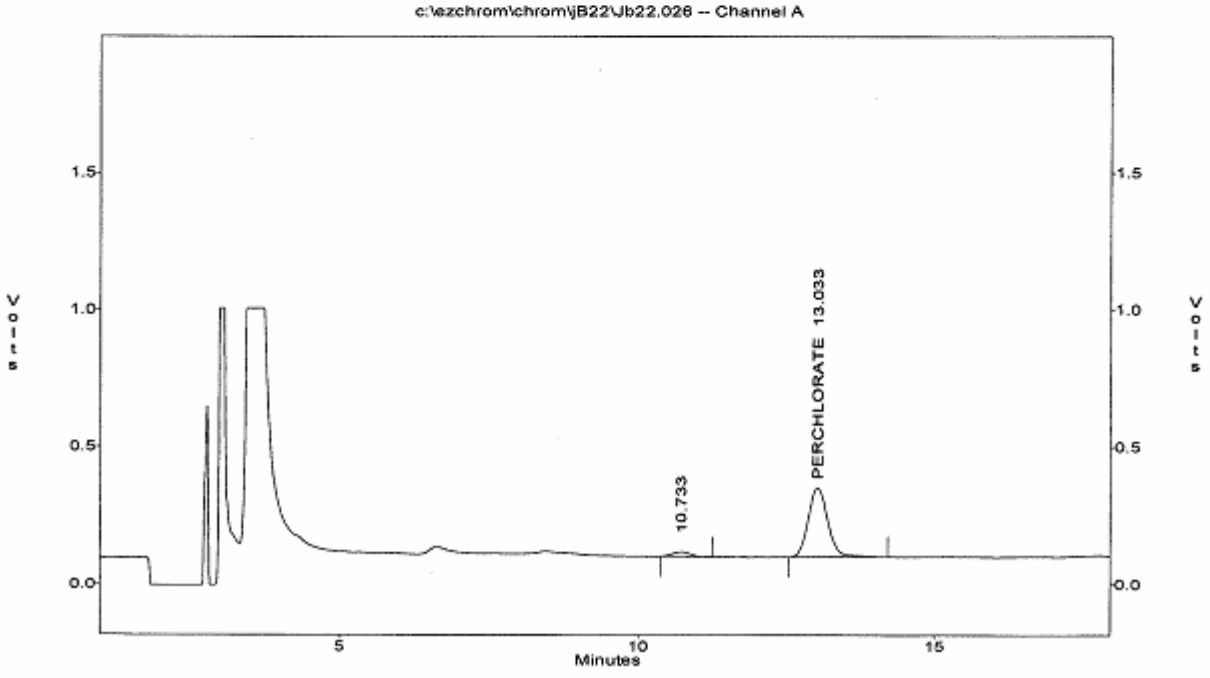
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.026
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : CCV2-30
Acquired : Feb 23, 2022 01:05:29
Printed : Feb 23, 2022 01:26:30
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
2	PERCHLORATE	13.03	5746816	252660	171880.766	31.820



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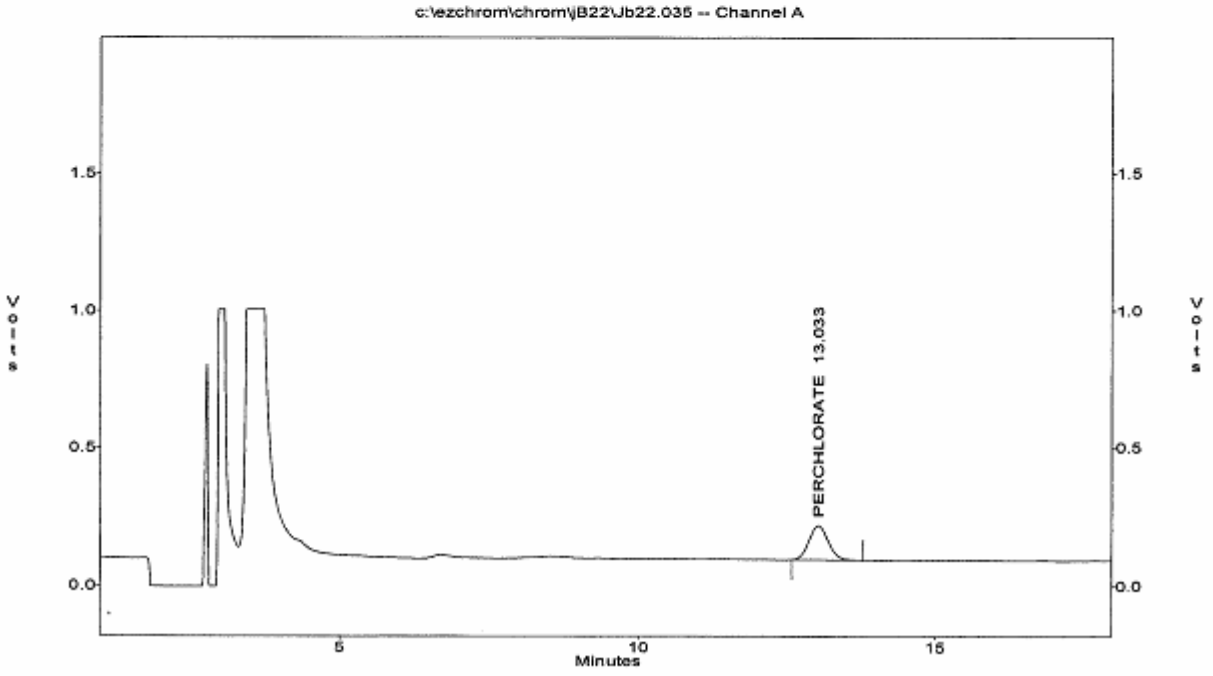
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.035
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : CCV3-15
Acquired : Feb 23, 2022 04:14:42
Printed : Feb 23, 2022 04:35:43
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.03	2764826	123017	171880.766	15.498



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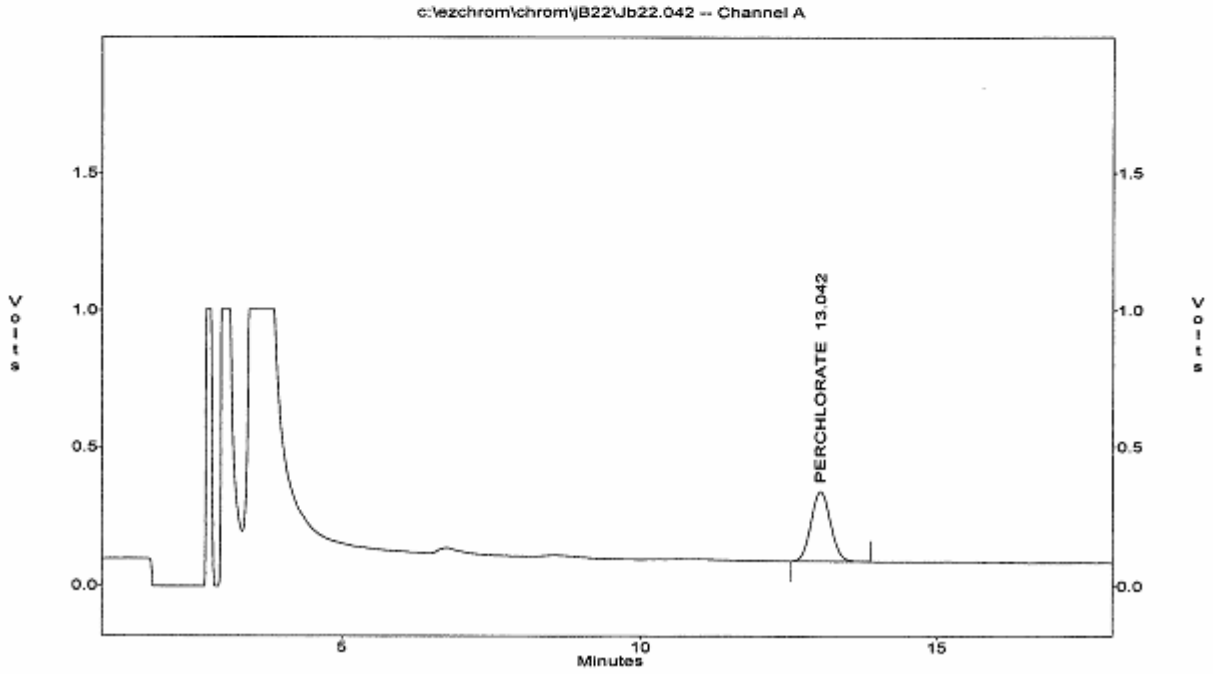
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.042
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : CCV4-30
Acquired : Feb 23, 2022 06:41:51
Printed : Feb 23, 2022 07:02:52
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.04	5668981	250995	171880.766	31.394



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ANALYTICAL LOG(S)

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

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Note: For samples and relavent QCs/Standards analyzed, refer to attached analytical sequence.

Eluent: NaOH (5.54 g) → 2 L Reagent Water SWR1-02-18-04

Reagent Water ID #: SWIR-011-06-08

Guard II	ID	NA
Ba		✓
Ag		✓
H		✓

Conductivity Meter Calibration

Conductivity Meter ID: DH

Standard ID	TV (µs/cm)	Reading (µS/cm)
SWIA-03-04-04	1000	1,000
SWIA-03-04-01	100,032	100,000
CMC Reading (Acceptance criteria: ± 30)		
SWIA-03-04-07	1410	1412

Temperature: 25 °C Thermometer ID: 181179499

Comments:

Linear Range (ppb): S_0 — 0
S_1 — 2.0
S_2 — 4.0
S_3 — 10.0
S_4 — 25.0
S_5 — 30.0
ICV — 15.0

PCB001W: B206; B207; B031

MS: used 0.15mL of S W48-003-05-11 to a final volume of 10mL ⇒ 15 ppb

Column: Dionex Ion Pac AS16 (4x250mm) #210505287
Guard Column: Dionex IonPac AG16 (4x50mm) #210308037
Flow: 1.50 mL/min Sample Loop: 1.0mL
Suppressor: Dionex AERS 500 (4mm) #170111035

	Snapseal container
0.45 µm filter lot #: 21089013	4 oz; lot #;2106023-1326-1W
0.2 µm filter lot #:	1.5 oz; lot #;248 21009

Book #:	A57-038
Instrument No.:	57
CMC Instrument No.:	29
Pipette ID:	SW9A-04-17
	A42762405
	SW9A-04-052
Balance ID:	10601202
Analytical Sequence:	JB22
Method File:	IC57B22
Analytical Batch:	PCB001W

SOP #	Rev. #
☐ EMAX-300M	4
☑ EMAX-314.0	5
☐ EMAX-	

STANDARDS ID		
ICAL	SW4B-003-06-01	
ICV	SW4B-003-06-02	
CCV-15	SW4B-003-06-03	
CCV-30		-06-04
LCS		-06-07
IPC		-06-06
MRL		-06-05
MS	↓	-05-11

MCT Ref. MCT H 2021

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZ-CHROM	
☐	

Analyzed By: JE

Date: 2/22/22

REPORT ID: 22B207

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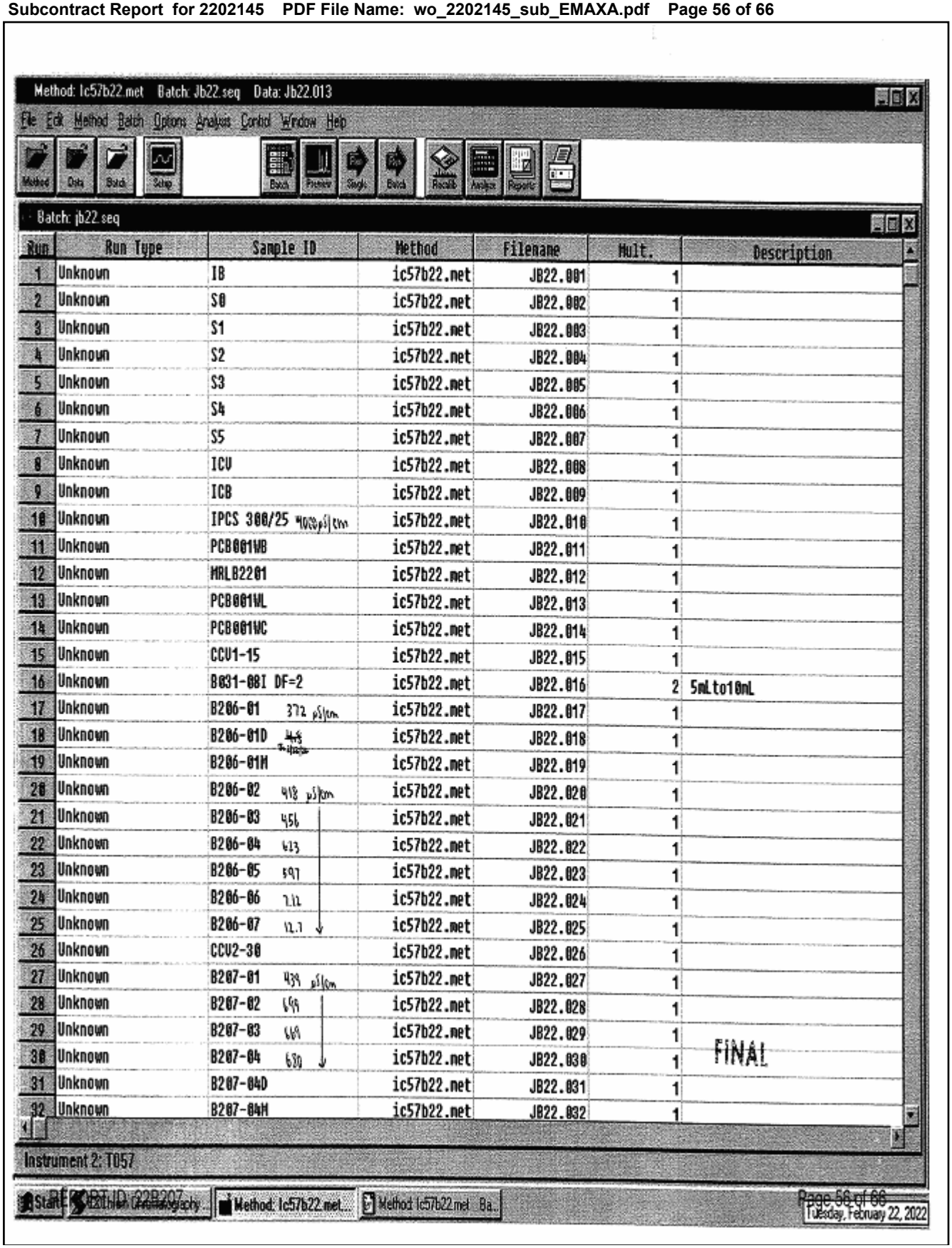

Method: Ic57b22.met Batch: Jb22.seq Data: Jb22.013

File Edit Method Batch Options Analyst Control Window Help

Batch: jb22.seq

Run	Run Type	Sample ID	Method	Filename	Mult.	Description
1	Unknown	IB	ic57b22.met	JB22.001	1	
2	Unknown	S0	ic57b22.met	JB22.002	1	
3	Unknown	S1	ic57b22.met	JB22.003	1	
4	Unknown	S2	ic57b22.met	JB22.004	1	
5	Unknown	S3	ic57b22.met	JB22.005	1	
6	Unknown	S4	ic57b22.met	JB22.006	1	
7	Unknown	S5	ic57b22.met	JB22.007	1	
8	Unknown	ICV	ic57b22.met	JB22.008	1	
9	Unknown	ICB	ic57b22.met	JB22.009	1	
10	Unknown	IPCS 300/25	ic57b22.met	JB22.010	1	
11	Unknown	PCB001WB	ic57b22.met	JB22.011	1	
12	Unknown	MRLB2201	ic57b22.met	JB22.012	1	
13	Unknown	PCB001WL	ic57b22.met	JB22.013	1	
14	Unknown	PCB001WC	ic57b22.met	JB22.014	1	
15	Unknown	CCV1-15	ic57b22.met	JB22.015	1	
16	Unknown	B031-08I DF=2	ic57b22.met	JB22.016	2	5mLto10mL
17	Unknown	B206-01 372	ic57b22.met	JB22.017	1	
18	Unknown	B206-01D	ic57b22.met	JB22.018	1	
19	Unknown	B206-01M	ic57b22.met	JB22.019	1	
20	Unknown	B206-02 418	ic57b22.met	JB22.020	1	
21	Unknown	B206-03 456	ic57b22.met	JB22.021	1	
22	Unknown	B206-04 613	ic57b22.met	JB22.022	1	
23	Unknown	B206-05 597	ic57b22.met	JB22.023	1	
24	Unknown	B206-06 7.11	ic57b22.met	JB22.024	1	
25	Unknown	B206-07 12.7	ic57b22.met	JB22.025	1	
26	Unknown	CCV2-30	ic57b22.met	JB22.026	1	
27	Unknown	B207-01 439	ic57b22.met	JB22.027	1	
28	Unknown	B207-02 699	ic57b22.met	JB22.028	1	
29	Unknown	B207-03 669	ic57b22.met	JB22.029	1	
30	Unknown	B207-04 630	ic57b22.met	JB22.030	1	FINAL
31	Unknown	B207-04D	ic57b22.met	JB22.031	1	
32	Unknown	B207-04M	ic57b22.met	JB22.032	1	

Instrument 2: T057

REPORT ID: 22B207

Start Method: Ic57b22.met... Method Ic57b22.met Ba...

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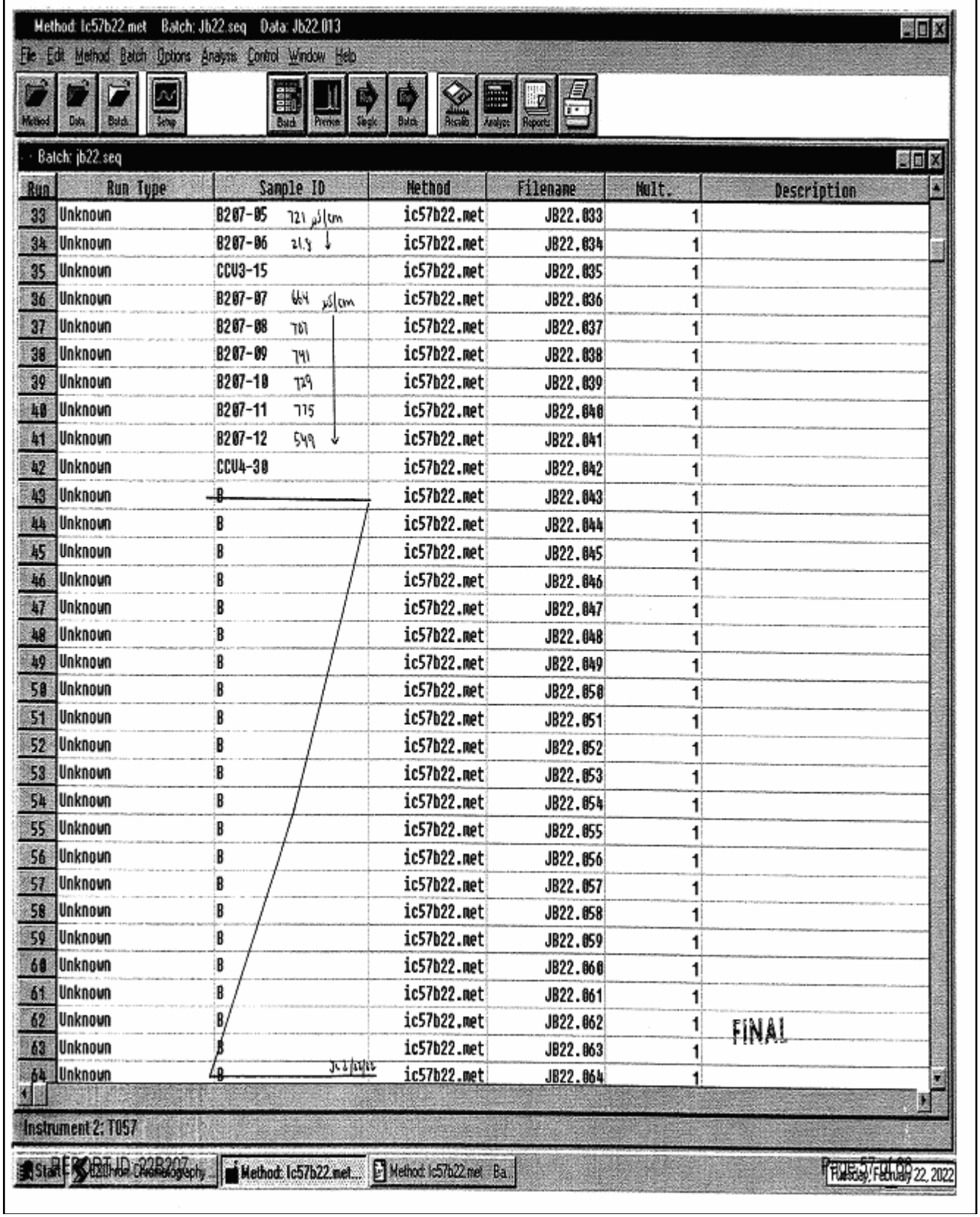
Tuesday, February 22, 2022



Method: ic57b22.met Batch: Jb22.seq Data: Jb22.013

File Edit Method Batch Options Analysis Control Window Help

Batch: jb22.seq

Run	Run Type	Sample ID	Method	Filename	Mult.	Description
33	Unknown	B207-05 721 µS/cm	ic57b22.met	JB22.033	1	
34	Unknown	B207-06 21.9 ↓	ic57b22.met	JB22.034	1	
35	Unknown	CCV3-15	ic57b22.met	JB22.035	1	
36	Unknown	B207-07 664 µS/cm	ic57b22.met	JB22.036	1	
37	Unknown	B207-08 701	ic57b22.met	JB22.037	1	
38	Unknown	B207-09 791	ic57b22.met	JB22.038	1	
39	Unknown	B207-10 729	ic57b22.met	JB22.039	1	
40	Unknown	B207-11 775	ic57b22.met	JB22.040	1	
41	Unknown	B207-12 549 ↓	ic57b22.met	JB22.041	1	
42	Unknown	CCV4-30	ic57b22.met	JB22.042	1	
43	Unknown	B	ic57b22.met	JB22.043	1	
44	Unknown	B	ic57b22.met	JB22.044	1	
45	Unknown	B	ic57b22.met	JB22.045	1	
46	Unknown	B	ic57b22.met	JB22.046	1	
47	Unknown	B	ic57b22.met	JB22.047	1	
48	Unknown	B	ic57b22.met	JB22.048	1	
49	Unknown	B	ic57b22.met	JB22.049	1	
50	Unknown	B	ic57b22.met	JB22.050	1	
51	Unknown	B	ic57b22.met	JB22.051	1	
52	Unknown	B	ic57b22.met	JB22.052	1	
53	Unknown	B	ic57b22.met	JB22.053	1	
54	Unknown	B	ic57b22.met	JB22.054	1	
55	Unknown	B	ic57b22.met	JB22.055	1	
56	Unknown	B	ic57b22.met	JB22.056	1	
57	Unknown	B	ic57b22.met	JB22.057	1	
58	Unknown	B	ic57b22.met	JB22.058	1	
59	Unknown	B	ic57b22.met	JB22.059	1	
60	Unknown	B	ic57b22.met	JB22.060	1	
61	Unknown	B	ic57b22.met	JB22.061	1	
62	Unknown	B	ic57b22.met	JB22.062	1	FINAL
63	Unknown	B	ic57b22.met	JB22.063	1	
64	Unknown	B Jc1/22/22	ic57b22.met	JB22.064	1	

Instrument 2: T057

REPORT ID: 22B207

Method: ic57b22.met... Method: ic57b22.met Ba...

Tuesday, February 22, 2022

RETENTION TIME WINDOW

RETENTION TIME WINDOW

METHOD 314.0

Lab Name:	EMAX	**METHOD:**	EMAX-314.0
Instrument ID:	DX500IC57	**IC COLUMN:**	AS16/AG16
		COLUMN SIZE:	4x250mm

Compound	Ical Mean RT	from	to	Retention Time Window
PERCHLORATE	**13.17**	12.92	13.42	**0.246**

IC57B22.MET

8/23/22

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STANDARD LOG(S)

EMAX LABORATORIES, INC.

STANDARDS LOG FOR PERCHLORATE

Book #: SW4B-003

Standard ID	Name	Source	Conc. (mg/L)	Aliquot (ml)	Reagent Water ID	Final Vol (ml)	Final Conc. (mg/L)	Preparation Date	Expiration Date	Prepared By	Comments	Micropipette ID
SW4B-003-06-01	ClO4	SW4B-003-05-03	1 ppm	0.2 mL	SW1A-011-06-08	100 mL	2 ppb	2/22/22	3/24/22	JC	ICAL	C
SW4B-003-06-	↓	↓	↓	0.4	↓	↓	4	↓	↓	↓	↓	C
SW4B-003-06-	↓	↓	↓	1.0	↓	↓	10	↓	↓	↓	↓	B
SW4B-003-06-	↓	↓	↓	2.5	↓	↓	25	↓	↓	↓	↓	A
SW4B-003-06-	↓	↓	↓	3.0	↓	↓	30	↓	↓	↓	↓	A
SW4B-003-06-02	ClO4	SW4B-003-05-11	1 ppm	1.5 mL	SW1A-011-06-08	100 mL	15 ppb	2/22/22	3/24/22	JC	ICV	B
SW4B-003-06-03	ClO4	SW4B-003-05-03	1 ppm	1.5 mL	SW1A-011-06-08	100 mL	15 ppb	2/22/22	3/24/22	JC	CCV-15	B
SW4B-003-06-04	ClO4	SW4B-003-05-03	↓	3.0	↓	↓	30	↓	↓	↓	CCV-30	A
SW4B-003-06-05	↓	↓	↓	0.2	↓	↓	2	↓	↓	↓	MRL	C
SW4B-003-06-06	ClO4	SW4B-LCS-05-11 / SW4B-[illegible]	1 ppm / 2500 ppm	2.5 mL / 1.2 mL	SW1A-011-06-08	100 mL	25 ppb / 300 ppm	2/22/22	3/24/22	JC	IPCS 300/25	A, B
SW4B-003-06-07	ClO4	SW4B-003-05-11	1 ppm	2.5 mL	SW1A-011-06-08	100 mL	25 ppb	2/22/22	3/24/22	JC	LCS	A
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												

Micropipette ID Legend: A. SW9A-04-17 B. A42762405 C. SW9A-04-052

EMAX LABORATORIES, INC.

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STANDARDS LOG FOR PERCHLORATE

Book #: SW4B-003

Standard ID	Name	Source	Conc. (mg/L)	Aliquot (ml)	Reagent Water ID	Final Vol (ml)	Final Conc. (mg/L)	Preparation Date	Expiration Date	Prepared By	Comments	Micropipette ID
SW4B-003-06-01	ClO_4	SW4B-003-05-03	1 ppm	0.2 mL	SW9A-011-06-08	100 mL	2 ppb	2/22/22	3/24/22	JC	ICAL	C
SW4B-003-06-				0.4			4					C
SW4B-003-06-				1.0			10					B
SW4B-003-06-				2.5			25					A
SW4B-003-06-				3.0			30					A
SW4B-003-06-02	ClO_4	SW4B-003-05-11	1 ppm	1.5 mL	SW9A-011-06-08	100 mL	15 ppb	2/22/22	3/24/22	JC	ICV	B
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												

Micropipette ID Legend: A. SW9A-04-17 B. A42762405 C. SW9A-04-052

REPORT ID: 22B207

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EMAX LABORATORIES, INC.

STANDARDS LOG FOR PERCHLORATE

Book #: SW4B-003

Standard ID	Name	Source	Conc. (mg/L)	Aliquot (ml)	Reagent Water ID	Final Vol (ml)	Final Conc. (mg/L)	Preparation Date	Expiration Date	Prepared By	Comments	Micropipette ID
SW4B-003-05-01	ClO_4	SW4B-003-01-0	1ppm	1.5mL	SW1A-011-05-06	100mL	15ppb	12/15/21	1/15/21	YC	CCV15	B
SW4B-003-05-02	↓	↓	↓	3.0mL	↓	↓	30ppb	↓	↓	↓	CCV30	A
SW4B-003-05-03	ClO_4	SW4A-02-01-01	1000ppm	0.1mL	SW1A-011-05-06	100mL	1ppm	1/4/22	7/4/22	JC	Primary Wk. Std.	C
SW4B-003-05-04	ClO_4	SW4B-003-05-03	1ppm	1.5mL	SW1A-011-05-06	100mL	15ppb	1/4/22	2/3/22	JC	CCV-15	B
SW4B-003-05-05	↓	↓	↓	3.0mL	↓	↓	30ppb	↓	↓	↓	CCV-30	A
SW4B-003-05-06	↓	↓	↓	0.2mL	↓	↓	2ppb	↓	↓	↓	MRL	C
SW4B-003-05-07	ClO_4	SW4B-003-05-03 / SW4A-01-01-08	1ppm / 1,000ppm	2.5mL / 1.2mL	SW1A-011-05-06	100mL	25ppb / 500ppm	1/4/22	2/3/22	JC	IPCS 300/25	A; B
SW4B-003-05-08	ClO_4	SW4B-003-05-03	1ppm	2.5mL	SW1A-011-05-06	100mL	25ppb	1/4/22	2/3/22	JC	LCS x1	A
SW4B-003-05-09	ClO_4	SW4B-003-05-03	1ppm	0.2mL	SW1A-011-05-06	100mL	2ppb	1/4/22	2/3/22	JC	LOQ	C
SW4B-003-05-10	↓	↓	↓	0.1mL	↓	↓	1ppb	↓	↓	↓	LOD	C
SW4B-003-05-11	ClO_4	SW4B									JC 1/26/22	
SW4B-003-05-11	ClO_4	SW4A-02-01-05	1000ppm	0.099mL	SW1A-011-05-06	100mL	1ppm	1/26/22	7/26/22	JC	Secondary Wk. Std.	C
SW4B-003-05-12	ClO_4	SW4B-003-05-11 / SW4A-01-01-08	1ppm / 1,000ppm	2.5mL / 1.2mL	SW1A-011-05-06	100mL	25ppb / 500ppm	1/24/22	2/25/22	JC	IPCS 300/25	A; B
SW4B-003-05-13	ClO_4	SW4B-003-05-11	1ppm	2.5mL	SW1A-011-05-06	100mL	25ppb	1/24/22	2/25/22	JC	LCS	A
SW4B-003-05-14	ClO_4	SW4B-003-05-03	1ppm	1.5mL	SW1A-011-05-06	100mL	15ppb	1/27/22	2/24/22	JC	CCV-15	B
SW4B-003-05-15	↓	↓	↓	3.0mL	↓	↓	30ppb	↓	↓	↓	CCV-30	A
SW4B-003-05-16	↓	↓	↓	0.2mL	↓	↓	2ppb	↓	↓	↓	MRL	C
SW4B-003-05-												
SW4B-003-05-												
SW4B-003-05-												
SW4B-003-05-											JC 1/25/22	

Micropipette ID Legend: A. SW9A-04-17 B. A42762405 C. SW9A-04-052

REPORT ID: 22B207

EMAX LABORATORIES, INC.

STANDARDS LOG FOR PERCHLORATE

Book No: SW4A-02

Standard ID	Name	Source	Lot #	Location	Rcvd. on	Rcvd. By	Exp. Date	Comments
SW4A-02-01-01	Perchlorate	AccuStandard	2a1025019	IC	11/22/21	YC	5/5/2027	100mL; 1000ug/mL
SW4A-02-01-02	Dionex OnGuard IIBa	Dionex	210924-1-Ba	Ic	12/13/21	Jc	9/1/2022	1 Box 057093
SW4A-02-01-03	Dionex OnGuard Ag	Dionex	211229-1-Ag	IC	1/11/22	Jc	12/1/2022	1 box 057089
SW4A-02-01-04	Mixed Common Anion Standard	Accu Standard	219035119-02	IC	1/18/22	Jc	11/7/2023	100mL; M-314.0-HCA-250X-1
SW4A-02-01-05	Perchlorate	Sep Science	S210812007	IC	1/20/22	Jc	~~5/1/2023~~ 1/24/23 KB 1/24/23	500mL; 1008 µg/mL 250-220-581
SW4A-02-01-06	Dionex On Guard II H	Dionex	220111-1-H	IC	1/24/22	Jc	1/1/2023	1 Box 057085
SW4A-02-01-07								
SW4A-02-01-08								
SW4A-02-01-09								
SW4A-02-01-10								

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

SW4A-02-01-01
rcvd- 11/22/21
exp: 5/15/23
YC 11/24/21

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO_4)
SRM: Ind. Std.
Lot: 221025019
Matrix: Water
Hazards: *Refer to SDS for complete safety information*

Signal Word: None

Date Certified: Feb 5, 2021
Expiration: Mar 5, 2023
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB AR-1463 ANAB AT-1339 ilac-MRA

Component		SRM #	Certified Concentration (µg/mL)
ClO_4	Perchlorate	Ind. Std.	1000

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±2.4%.
The final solution was checked against an independent standard to verify its concentration.
We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as ASTM Type I 18 megohm deionized water.
All glassware used in preparation is Class A.
All weights are traceable through NIST, Test No. 684/289871-17
All bottles are triple rinsed with deionized water prior to use.
Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware. Keep bottle tightly capped.

Certified By: Maigan O'Leary
Maigan O'Leary, Inorganic QC Manager

Page 1 of 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/IND-001 Rev. 7/20

REPORT ID: 228207 Page 65 of 66

SCP SCIENCE

Providing Innovative Solutions to Analytical Chemists

Certificate of Analysis

SW4A-02-01-05
Rcvd: 1/20/22 JC
Exp: ~~8/1/2022~~
1/24/23
LC 1/24/22

ClO_4^-

1.0 DESCRIPTION: ***Accu*SPEC – IC Standard – Perchlorate 1000 µg/ml**

Catalogue Number:	**250-220-58x**
Starting Material:	Potassium perchlorate ACS
Lot Number:	**S210812007**
Expiration Date:	**May 2023** (or 12 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Certified Value:	**1008 ± 10 µg/ml**
Method of analysis:	Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES). Result calculated based on the value of the counter-ion.
Traceability:	NIST Standard Reference Material 3141a

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sx}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:

Density: **0.999 g/ml @ 23.1°C**

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Yaling Sui, Chemist
Certification Date: August 26, 2021

Yaling Sui

REPORT ID: 22B207 Pg 1 of / de 2 Page 66 of 66

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell	**Reported:** 03/24/2022 11:44
3761 Attucks Drive	Project: JPL- GW Monitoring Wells-CLP
Powell, OH 43065	Project Number: 1Q22
	Project Manager: David Conner

Notes And Definitions

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

Date of Report: 03/24/2022

David Conner

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Client Project:	1Q22
BCL Project:	JPL- GW Monitoring Wells-CLP
BCL Work Order:	2202321
Invoice ID:	

Enclosed are the results of analyses for samples received by the laboratory on 2/2/2022. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1001281292

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Operations Manager

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

Table of Contents

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BC Laboratories, Inc.

Chain of Custody Form

22-02321

*Required Fields

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Report To: Client:* Tidewater, Inc.	Project Description:* JPL-GW Monitoring
Attn:* David Conner	
Street Address:* 3761 Attucks Drive	Project Code:* 4Q21
City:* Powell State:* OH Zip:* 43065	
Phone#:* 626 | 298 - 5715 Fax#: 614 | 792 - 2897	Sampler (s):* Blaine Tech L. Henderson
Email Address: david.conner@tideh2o.net	
Submission #:	

Billing

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

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 -218.6 (mg/L)	Cl, NO3, NO2, SO4	Orthophosphate 365.1				Notes
-1	TB-3-020222	2/2/22	0800	W	X									
-2	MW-22-3-020222		0930		X	X	X	X						MS/MSD + level IV
-3	MW-22-2-020222		1020		X	X	X	X						
-4	MW-22-1-020222		1055		X	X	X	X						
-5	MW-24-4-020222		1220			X		X						
-6	MW-24-3-020222		1250		X	X	X	X						
-7	DUP-3-1Q22		1300		X	X	X	X						
-8	MW-24-2-020222		1340		X	X	X	X						
-9	MW-24-1-020222		1420		X	X	X	X	X	X				
-10	EB-3-020222		1350		X	X	X	X						

CHK BY [illegible] DISTRIBUTION [illegible] SUB-OUT ☐

SHORT HOLDING TIME
Cr+6 NO2 NO3 OP SS
DO Cl2 BOD Other MBAS COT

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

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. Relinquished By: [signature]	2/2/22	3:10	1. Received By: Hector Barron	2-2-22	3:10
2. Relinquished By: Hector Barron	2-2-22	2000	2. Received By: [signature]	2/2/22	2000
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

Chain of Custody and Cooler Receipt Form for 2202321 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 22-02321

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☒ W / S

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: 0.98 Container: PE Thermometer ID: 27Ci Date/Time: 12/07/22

Temperature: (A) 0.8 °C / (C) 0.5 °C Analyst Init: ZCi 2000

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / (16oz) PE UNPRES		I,J	E	E		E	E	E	E,F	E
2oz Cr+6		G,H	D	D	A	D	D	D	D	D
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz (8oz) 16oz		K,L	F	F	B	F	F	F	G	F
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		A-F	A-C	A-C		A-C	A-C	A-C	A-C	A-C
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: FC Date/Time: 2/3/22 1050

A = Actual / C = Corrected

Rev 22 04/13/21

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Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202321-01	**COC Number:**	---	**Receive Date:**	02/02/2022 20:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/02/2022 08:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-3-020222	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Trip Blank
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	TB-3
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	
2202321-02	**COC Number:**	---	**Receive Date:**	02/02/2022 20:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/02/2022 09:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-3-020222	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	MW-22-3
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	
2202321-03	**COC Number:**	---	**Receive Date:**	02/02/2022 20:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/02/2022 10:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-2-020222	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	MW-22-2
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202321-04	**COC Number:**	---	**Receive Date:**	02/02/2022 20:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/02/2022 10:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-1-020222	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	MW-22-1
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	
2202321-05	**COC Number:**	---	**Receive Date:**	02/02/2022 20:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/02/2022 12:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-24-4-020222	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	MW-24-4
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	
2202321-06	**COC Number:**	---	**Receive Date:**	02/02/2022 20:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/02/2022 12:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-24-3-020222	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	MW-24-3
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202321-07	**COC Number:**	---	**Receive Date:**	02/02/2022 20:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/02/2022 13:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-3-1Q22	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	DUP
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	
2202321-08	**COC Number:**	---	**Receive Date:**	02/02/2022 20:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/02/2022 13:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-24-2-020222	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	MW-24-2
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	
2202321-09	**COC Number:**	---	**Receive Date:**	02/02/2022 20:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/02/2022 14:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-24-1-020222	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID:	
			Location ID (FieldPoint):	MW-24-1
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

2202321-10

COC Number: ---
Project Number: NASA/JPL
Sampling Location: ---
Sampling Point: EB-3-020222
Sampled By: BTST

Receive Date: 02/02/2022 20:00
Sampling Date: 02/02/2022 13:50
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Delivery Work Order:
Global ID:
Location ID (FieldPoint): EB-3
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-01 | **Client Sample Name:** NASA/JPL, TB-3-020222, 2/2/2022 8:00:00AM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-01 | **Client Sample Name:** NASA/JPL, TB-3-020222, 2/2/2022 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-01 | **Client Sample Name:** NASA/JPL, TB-3-020222, 2/2/2022 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 18:28	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202321-01 | **Client Sample Name:** NASA/JPL, TB-3-020222, 2/2/2022 8:00:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 18:28	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-02 | **Client Sample Name:** NASA/JPL, MW-22-3-020222, 2/2/2022 9:30:00AM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-02 | **Client Sample Name:** NASA/JPL, MW-22-3-020222, 2/2/2022 9:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-02 | **Client Sample Name:** NASA/JPL, MW-22-3-020222, 2/2/2022 9:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	91.7	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 09:45	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202321-02 | **Client Sample Name:** NASA/JPL, MW-22-3-020222, 2/2/2022 9:30:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 09:45	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202321-02 | **Client Sample Name:** NASA/JPL, MW-22-3-020222, 2/2/2022 9:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0021**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	**2.4**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 10:52	MKB	IC-4	1	B131421	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:34	KHS	PE-EL2	1	B131049	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-03 | **Client Sample Name:** NASA/JPL, MW-22-2-020222, 2/2/2022 10:20:00AM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-03 | **Client Sample Name:** NASA/JPL, MW-22-2-020222, 2/2/2022 10:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-03 | **Client Sample Name:** NASA/JPL, MW-22-2-020222, 2/2/2022 10:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 10:33	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202321-03 | **Client Sample Name:** NASA/JPL, MW-22-2-020222, 2/2/2022 10:20:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 10:33	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202321-03 | **Client Sample Name:** NASA/JPL, MW-22-2-020222, 2/2/2022 10:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0014**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	**2.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 11:31	MKB	IC-4	1	B131421	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:52	KHS	PE-EL2	1	B131049	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-04 | **Client Sample Name:** NASA/JPL, MW-22-1-020222, 2/2/2022 10:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.47**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-04 | **Client Sample Name:** NASA/JPL, MW-22-1-020222, 2/2/2022 10:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.41**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-04 | **Client Sample Name:** NASA/JPL, MW-22-1-020222, 2/2/2022 10:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 10:58	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202321-04 | **Client Sample Name:** NASA/JPL, MW-22-1-020222, 2/2/2022 10:55:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 10:58	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202321-04 | **Client Sample Name:** NASA/JPL, MW-22-1-020222, 2/2/2022 10:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00072**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	**1.8**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 11:40	MKB	IC-4	1	B131421	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:53	KHS	PE-EL2	1	B131049	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202321-05 | **Client Sample Name:** NASA/JPL, MW-24-4-020222, 2/2/2022 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00011**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	**2.5**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 11:50	MKB	IC-4	1	B131421	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:55	KHS	PE-EL2	1	B131049	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-06 | **Client Sample Name:** NASA/JPL, MW-24-3-020222, 2/2/2022 12:50:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-06 | **Client Sample Name:** NASA/JPL, MW-24-3-020222, 2/2/2022 12:50:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-06 | **Client Sample Name:** NASA/JPL, MW-24-3-020222, 2/2/2022 12:50:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 11:22	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202321-06 | **Client Sample Name:** NASA/JPL, MW-24-3-020222, 2/2/2022 12:50:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 11:22	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202321-06 | **Client Sample Name:** NASA/JPL, MW-24-3-020222, 2/2/2022 12:50:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00010**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	**0.94**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 12:28	MKB	IC-4	1	B131421	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:57	KHS	PE-EL2	1	B131049	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
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Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-07 | **Client Sample Name:** NASA/JPL, DUP-3-1Q22, 2/2/2022 1:00:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
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Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-07 | **Client Sample Name:** NASA/JPL, DUP-3-1Q22, 2/2/2022 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-07 | **Client Sample Name:** NASA/JPL, DUP-3-1Q22, 2/2/2022 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 18:53	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202321-07 | **Client Sample Name:** NASA/JPL, DUP-3-1Q22, 2/2/2022 1:00:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 18:53	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202321-07 | **Client Sample Name:** NASA/JPL, DUP-3-1Q22, 2/2/2022 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00011**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	**1.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 12:38	MKB	IC-4	1	B131421	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 09:58	KHS	PE-EL2	1	B131049	EPA 200.2

DCN = Data Continuation Number

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Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-08 | **Client Sample Name:** NASA/JPL, MW-24-2-020222, 2/2/2022 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.67**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.18**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	**0.44**	**ug/L**	**0.50**	**0.17**	**EPA-524.2**	ND	**J**	1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-08 | **Client Sample Name:** NASA/JPL, MW-24-2-020222, 2/2/2022 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-08 | **Client Sample Name:** NASA/JPL, MW-24-2-020222, 2/2/2022 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 19:17	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202321-08 | **Client Sample Name:** NASA/JPL, MW-24-2-020222, 2/2/2022 1:40:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 19:17	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202321-08 | **Client Sample Name:** NASA/JPL, MW-24-2-020222, 2/2/2022 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00031**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	**0.84**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 12:47	MKB	IC-4	1	B131421	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 10:00	KHS	PE-EL2	1	B131049	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-09 | **Client Sample Name:** NASA/JPL, MW-24-1-020222, 2/2/2022 2:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	**2.3**	**ug/L**	**0.50**	**0.17**	**EPA-524.2**	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**4.7**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-09 | **Client Sample Name:** NASA/JPL, MW-24-1-020222, 2/2/2022 2:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.6**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.30**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-09 | **Client Sample Name:** NASA/JPL, MW-24-1-020222, 2/2/2022 2:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 19:42	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202321-09 | **Client Sample Name:** NASA/JPL, MW-24-1-020222, 2/2/2022 2:20:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 19:42	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 2202321-09 | **Client Sample Name:** NASA/JPL, MW-24-1-020222, 2/2/2022 2:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Chloride	**79**	**mg/L**	**0.50**	**0.13**	**EPA-300.0**	0.21		1
Nitrate as N	**2.5**	**mg/L**	**0.10**	**0.024**	**EPA-300.0**	ND		1
Sulfate	**58**	**mg/L**	**1.0**	**0.14**	**EPA-300.0**	0.26		1
Nitrite as N	ND	mg/L	0.050	0.010	EPA-353.2	ND		2
ortho-Phosphate as P	ND	mg/L	0.050	0.017	EPA-365.1	ND		3

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-300.0	02/03/22 15:00	02/03/22 21:32	KB1	IC2	1	B130975	No Prep
2	EPA-353.2	02/03/22 19:41	02/03/22 19:44	MKB	KONE-1	1	B131090	No Prep
3	EPA-365.1	02/03/22 20:38	02/03/22 20:52	MKB	SC-1	1	B131082	No Prep

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202321-09 | **Client Sample Name:** NASA/JPL, MW-24-1-020222, 2/2/2022 2:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0011**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	**5.6**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 12:57	MKB	IC-4	1	B131421	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 10:02	KHS	PE-EL2	1	B131049	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-10 | **Client Sample Name:** NASA/JPL, EB-3-020222, 2/2/2022 1:50:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-10 | **Client Sample Name:** NASA/JPL, EB-3-020222, 2/2/2022 1:50:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202321-10 | **Client Sample Name:** NASA/JPL, EB-3-020222, 2/2/2022 1:50:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 20:06	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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3761 Attucks Drive
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Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202321-10 | **Client Sample Name:** NASA/JPL, EB-3-020222, 2/2/2022 1:50:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/03/22 12:00	02/04/22 20:06	MGC	MS-V5	1	B130892	EPA 524.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202321-10 | **Client Sample Name:** NASA/JPL, EB-3-020222, 2/2/2022 1:50:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000052**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 12:19	MKB	IC-4	1	B131421	No Prep
2	EPA-200.8	02/04/22 18:45	02/07/22 10:03	KHS	PE-EL2	1	B131049	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B130892						
Benzene	B130892-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B130892-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B130892-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B130892-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B130892-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B130892-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B130892-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B130892-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B130892-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B130892-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B130892-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B130892-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B130892-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B130892-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B130892-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B130892-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B130892-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B130892-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B130892-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B130892-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B130892-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B130892-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B130892-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B130892-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B130892-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B130892-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B130892-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B130892-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B130892-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B130892-BLK1	ND	ug/L	0.50	0.14	

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Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B130892						
trans-1,3-Dichloropropene	B130892-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B130892-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B130892-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B130892-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B130892-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B130892-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B130892-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B130892-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B130892-BLK1	ND	ug/L	0.50	0.12	
Styrene	B130892-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B130892-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B130892-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B130892-BLK1	ND	ug/L	0.50	0.23	
Toluene	B130892-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B130892-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B130892-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B130892-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B130892-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B130892-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B130892-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B130892-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B130892-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B130892-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B130892-BLK1	ND	ug/L	0.50	0.18	
Acetone	B130892-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B130892-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B130892-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B130892-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B130892-BLK1	ND	ug/L	2.0	2.0	
Carbon disulfide	B130892-BLK1	ND	ug/L	0.50	0.48	
trans-1,4-Dichloro-2-butene	B130892-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B130892-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B130892-BLK1	ND	ug/L	4.0	1.3	

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Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B130892						
Ethyl t-butyl ether	B130892-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B130892-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B130892-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B130892-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B130892-BLK1	ND	ug/L	5.0	3.3	
Methyl iodide	B130892-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B130892-BLK1	ND	ug/L	5.0	2.4	
Methyl methacrylate	B130892-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B130892-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B130892-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B130892-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B130892-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B130892-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	**B130892-BLK1**	**105**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B130892-BLK1**	**99.2**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B130892-BLK1**	**97.3**	%	**80 - 120 (LCL - UCL)**		

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Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B130892										
Benzene	B130892-BS1	LCS	23.790	25.000	ug/L	95.2		70 - 130		
Bromodichloromethane	B130892-BS1	LCS	24.550	25.000	ug/L	98.2		70 - 130		
Chlorobenzene	B130892-BS1	LCS	22.510	25.000	ug/L	90.0		70 - 130		
Chloroethane	B130892-BS1	LCS	23.160	25.000	ug/L	92.6		70 - 130		
1,4-Dichlorobenzene	B130892-BS1	LCS	22.470	25.000	ug/L	89.9		70 - 130		
1,1-Dichloroethane	B130892-BS1	LCS	23.980	25.000	ug/L	95.9		70 - 130		
1,1-Dichloroethene	B130892-BS1	LCS	25.350	25.000	ug/L	101		70 - 130		
Toluene	B130892-BS1	LCS	23.470	25.000	ug/L	93.9		70 - 130		
Trichloroethene	B130892-BS1	LCS	23.750	25.000	ug/L	95.0		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B130892-BS1	LCS	10.370	10.000	ug/L	104		75 - 125		
Toluene-d8 (Surrogate)	B130892-BS1	LCS	10.130	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	B130892-BS1	LCS	9.8400	10.000	ug/L	98.4		80 - 120		

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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: B130892	Used client sample: Y - Description: MW-22-3-020222, 02/02/2022 09:30										
Benzene	MS	2202321-02	ND	24.050	25.000	ug/L		96.2		70 - 130	
	MSD	2202321-02	ND	22.710	25.000	ug/L	5.7	90.8	20	70 - 130	
Bromodichloromethane	MS	2202321-02	ND	24.800	25.000	ug/L		99.2		70 - 130	
	MSD	2202321-02	ND	23.180	25.000	ug/L	6.8	92.7	20	70 - 130	
Chlorobenzene	MS	2202321-02	ND	23.590	25.000	ug/L		94.4		70 - 130	
	MSD	2202321-02	ND	22.050	25.000	ug/L	6.7	88.2	20	70 - 130	
Chloroethane	MS	2202321-02	ND	23.090	25.000	ug/L		92.4		70 - 130	
	MSD	2202321-02	ND	22.820	25.000	ug/L	1.2	91.3	20	70 - 130	
1,4-Dichlorobenzene	MS	2202321-02	ND	23.990	25.000	ug/L		96.0		70 - 130	
	MSD	2202321-02	ND	22.090	25.000	ug/L	8.2	88.4	20	70 - 130	
1,1-Dichloroethane	MS	2202321-02	ND	23.910	25.000	ug/L		95.6		70 - 130	
	MSD	2202321-02	ND	23.040	25.000	ug/L	3.7	92.2	20	70 - 130	
1,1-Dichloroethene	MS	2202321-02	ND	25.720	25.000	ug/L		103		70 - 130	
	MSD	2202321-02	ND	24.550	25.000	ug/L	4.7	98.2	20	70 - 130	
Toluene	MS	2202321-02	ND	24.130	25.000	ug/L		96.5		70 - 130	
	MSD	2202321-02	ND	22.560	25.000	ug/L	6.7	90.2	20	70 - 130	
Trichloroethene	MS	2202321-02	ND	24.020	25.000	ug/L		96.1		70 - 130	
	MSD	2202321-02	ND	22.890	25.000	ug/L	4.8	91.6	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2202321-02	ND	9.9900	10.000	ug/L		99.9		75 - 125	
	MSD	2202321-02	ND	9.9100	10.000	ug/L	0.8	99.1		75 - 125	
Toluene-d8 (Surrogate)	MS	2202321-02	ND	9.9000	10.000	ug/L		99.0		80 - 120	
	MSD	2202321-02	ND	9.9000	10.000	ug/L	0	99.0		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	2202321-02	ND	10.240	10.000	ug/L		102		80 - 120	
	MSD	2202321-02	ND	10.050	10.000	ug/L	1.9	100		80 - 120	

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Project Number: 1Q22
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: B130892						
Chloroacetonitrile	B130892-BLK1	0	ug/L			
1-Chlorobutane	B130892-BLK1	0	ug/L			
1,1-Dichloropropanone	B130892-BLK1	0	ug/L			
Methyl acrylate	B130892-BLK1	0	ug/L			
Nitrobenzene	B130892-BLK1	0	ug/L			
2-Nitropropane	B130892-BLK1	0	ug/L			

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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: B130975						
Chloride	**B130975-BLK1**	**0.20600**	**mg/L**	**0.50**	**0.13**	**J**
Nitrate as N	B130975-BLK1	ND	mg/L	0.10	0.024	
Sulfate	**B130975-BLK1**	**0.26200**	**mg/L**	**1.0**	**0.14**	**J**
QC Batch ID: B131082						
ortho-Phosphate as P	B131082-BLK1	ND	mg/L	0.050	0.017	
QC Batch ID: B131090						
Nitrite as N	B131090-BLK1	ND	mg/L	0.050	0.010	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B130975										
Chloride	B130975-BS1	LCS	50.070	50.000	mg/L	100		90 - 110		
Nitrate as N	B130975-BS1	LCS	4.9940	5.0000	mg/L	99.9		90 - 110		
Sulfate	B130975-BS1	LCS	100.41	100.00	mg/L	100		90 - 110		
QC Batch ID: B131082										
ortho-Phosphate as P	B131082-BS1	LCS	0.50870	0.50000	mg/L	102		90 - 110		
QC Batch ID: B131090										
Nitrite as N	B131090-BS1	LCS	0.50845	0.50000	mg/L	102		90 - 110		

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B130975	Used client sample: N										
Chloride	DUP	2202297-06	82.130	82.208		mg/L	0.1		10		
	MS	2202297-06	82.130	138.44	50.505	mg/L		111		80 - 120	
	MSD	2202297-06	82.130	141.22	50.505	mg/L	2.0	117	10	80 - 120	
Nitrate as N	DUP	2202297-06	0.62800	0.64100		mg/L	2.0		10		
	MS	2202297-06	0.62800	5.8667	5.0505	mg/L		104		80 - 120	
	MSD	2202297-06	0.62800	5.9960	5.0505	mg/L	2.2	106	10	80 - 120	
Sulfate	DUP	2202297-06	113.55	113.11		mg/L	0.4		10		
	MS	2202297-06	113.55	222.08	101.01	mg/L		107		80 - 120	
	MSD	2202297-06	113.55	226.38	101.01	mg/L	1.9	112	10	80 - 120	
QC Batch ID: B131082	Used client sample: N										
ortho-Phosphate as P	DUP	2202316-01	0.77500	0.76250		mg/L	1.6		10		
	MS	2202316-01	0.77500	3.4089	2.6316	mg/L		100		90 - 110	
	MSD	2202316-01	0.77500	3.4068	2.6316	mg/L	0.1	100	10	90 - 110	
QC Batch ID: B131090	Used client sample: N										
Nitrite as N	DUP	2202295-01	0.010423	0.011369		mg/L	8.7		10		J
	MS	2202295-01	0.010423	0.54092	0.52632	mg/L		101		90 - 110	
	MSD	2202295-01	0.010423	0.54124	0.52632	mg/L	0.1	101	10	90 - 110	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131049						
Total Recoverable Chromium	B131049-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B131421						
Hexavalent Chromium	B131421-BLK1	ND	mg/L	0.00020	0.000020	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131049										
Total Recoverable Chromium	B131049-BS1	LCS	43.288	40.000	ug/L	108		85 - 115		
QC Batch ID: B131421										
Hexavalent Chromium	B131421-BS1	LCS	0.019991	0.020000	mg/L	100		90 - 110		
	B131421-BSD1	LCSD	0.019885	0.020000	mg/L	99.4	0.5	90 - 110	10	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131049	Used client sample: Y - Description: MW-22-3-020222, 02/02/2022 09:30										
Total Recoverable Chromium	DUP	**2202321-02**	**2.3810**	**3.2380**		**ug/L**	**30.5**		**20**		**A02**
	MS	**2202321-02**	**2.3810**	**39.542**	**40.000**	**ug/L**		**92.9**		**70 - 130**	
	MSD	**2202321-02**	**2.3810**	**41.416**	**40.000**	**ug/L**	**4.6**	**97.6**	**20**	**70 - 130**	
QC Batch ID: B131421	Used client sample: Y - Description: MW-22-3-020222, 02/02/2022 09:30										
Hexavalent Chromium	DUP	2202321-02	0.0021400	0.0021510		mg/L	0.5		10		
	MS	2202321-02	0.0021400	0.022033	0.020202	mg/L		98.5		90 - 110	
	MSD	2202321-02	0.0021400	0.022030	0.020202	mg/L	0.0	98.5	10	90 - 110	

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 03-08-2022
EMAX Batch No.: 228225

Attn: Natalie Serda

Pace Analytical
4100 Atlas Court
Bakersfield CA 93308

Subject: Laboratory Report
Project: 2202321

Enclosed is the Laboratory report for samples received on 02/24/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
2202321-02	B225-01	02/02/22	WATER	PERCHLORATE BY IC
2202321-03	B225-02	02/02/22	WATER	PERCHLORATE BY IC
2202321-04	B225-03	02/02/22	WATER	PERCHLORATE BY IC
2202321-06	B225-04	02/02/22	WATER	PERCHLORATE BY IC
2202321-07	B225-05	02/02/22	WATER	PERCHLORATE BY IC
2202321-08	B225-06	02/02/22	WATER	PERCHLORATE BY IC
2202321-09	B225-07	02/02/22	WATER	PERCHLORATE BY IC
2202321-10	B225-08	02/02/22	WATER	PERCHLORATE BY IC
2202321-02MS	B225-01M	02/02/22	WATER	PERCHLORATE BY IC
2202321-02DUP	B225-01D	02/02/22	WATER	PERCHLORATE BY IC

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

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912021-19
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

REPORT ID: 22B225

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SUBCONTRACT ORDER

BC Laboratories 22B225

2202321

SENDING LABORATORY:

BC Laboratories
4100 Atlas Ct
Bakersfield, CA 93308
Phone: 661-327-4911
Fax: 661-327-1918
Project Manager: Natalie Serda

RECEIVING LABORATORY:

Emax Laboratory SEMAXA
3051 Fujita Street
Torrance, CA 90505
Phone :(310) 618-8889
Fax: 310-618-0818

2/23/22 15:42

	Analysis	Due	Expires	Laboratory ID	Comments
1	**Sample ID: 2202321-02**	**Water**	**Sampled:02/02/22 09:30**		**MW-22-3-020222 (MS/MSD -LEVEL IV)**
	i314.0w Perchlorate (ug/L)	02/16/22 17:00	03/02/22 09:30		Global ID #0000000000, Company ID BTST
	Containers Supplied: PA PE				
2	**Sample ID: 2202321-03**	**Water**	**Sampled:02/02/22 10:20**		**MW-22-2-020222 (LEVEL III)**
	i314.0w Perchlorate (ug/L)	02/16/22 17:00	03/02/22 10:20		
	Containers Supplied:				
3	**Sample ID: 2202321-04**	**Water**	**Sampled:02/02/22 10:55**		**MW-22-1-020222 (LEVEL III)**
	i314.0w Perchlorate (ug/L)	02/16/22 17:00	03/02/22 10:55		
	Containers Supplied:				
4	**Sample ID: 2202321-06**	**Water**	**Sampled:02/02/22 12:50**		**MW-24-3-020222 (LEVEL III)**
	i314.0w Perchlorate (ug/L)	02/16/22 17:00	03/02/22 12:50		
	Containers Supplied:				
5	**Sample ID: 2202321-07**	**Water**	**Sampled:02/02/22 13:00**		**DUP-3-1Q22 (LEVEL III)**
	i314.0w Perchlorate (ug/L)	02/16/22 17:00	03/02/22 13:00		
	Containers Supplied:				

Released By	Date	Received By	Date
KDL	2-23-22		
			02/24/22 10:30
Released By	Date	Received By	Date

Page 1 of 2

Temp: 4.5°/4.0°

REPORT ID: 22B225

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SUBCONTRACT ORDER

22B225

BC Laboratories

2202321

Analysis	Due	Expires	Laboratory ID	Comments
6 **Sample ID: 2202321-08**	**Water**	**Sampled:02/02/22 13:40**		**MW-24-2-020222 (LEVEL III)**
i314.0w Perchlorate (ug/L)	02/16/22 17:00	03/02/22 13:40		
Containers Supplied:				
7 **Sample ID: 2202321-09**	**Water**	**Sampled:02/02/22 14:20**		**MW-24-1-020222 (LEVEL III)**
i314.0w Perchlorate (ug/L)	02/16/22 17:00	03/02/22 14:20		
Containers Supplied:				
8 **Sample ID: 2202321-10**	**Water**	**Sampled:02/02/22 13:50**		**EB-3-020222 (LEVEL III)**
i314.0w Perchlorate (ug/L)	02/16/22 17:00	03/02/22 13:50		
Containers Supplied:				

Released By	Date	Received By	Date
[signature]	2-23-22		
		[signature]	02/24/22 10:30
Released By	Date	Received By	Date

Page 2 of 2

REPORT ID: 22B225

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SAMPLE RECEIPT FORM 1

Reference: Addendum SM02.11.1
Form: SM02F1

Type of Delivery	Airbill / Tracking Number	ECN 22B225
☐ Fedex ☐ UPS ☑ GSO ☐ Others	470570223 223 710 394 56	Recipient Jocelyne Solis-Ramos
☐ EMAX Courier ☐ Client Delivery		Date 02/24/22 Time 10:30

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 plastic bags		
Condition	☐ Custody Seal	☐ Intact	☐ Damaged		
Packaging correction factor - 0.5	☐ Bubble Pack	☐ Styrofoam	☐ Popcorn	☐ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 4.5/4.0 °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 210191066 on 14/4	B - S/N 210271396	(C) S/N 210271599	D - S/N _____	

Comments: ☐ Temperature is out of range. PM was informed IMMEDIATELY.

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1-B	1-B	D1		R1

☐ 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: Sample 1 reads MS/MSD on COC, received 1 500mL poly.

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	_____

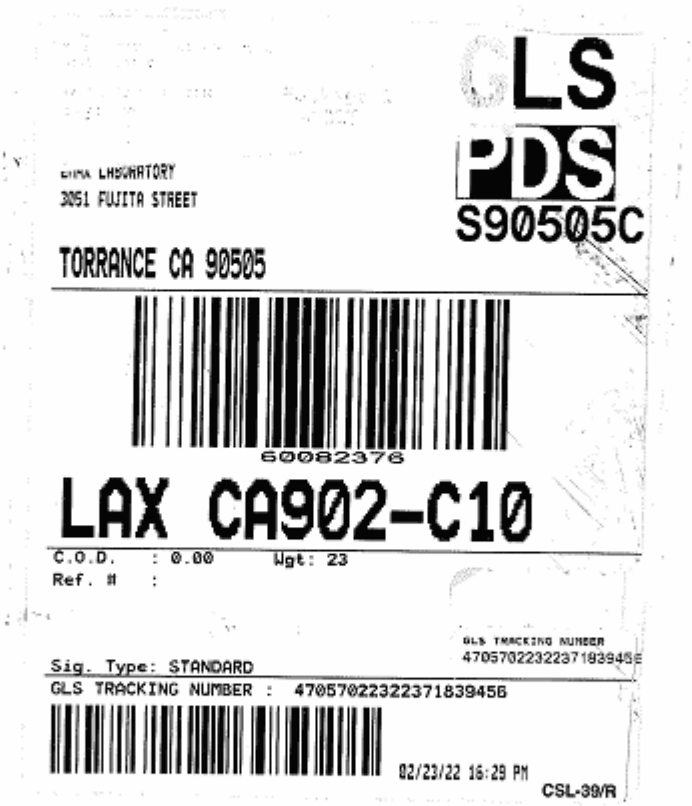
REVIEWS:

Sample Labeling Jocelyne Solis-Ramos Date 02/24/22 2/24/22

SRF Date 2/24/22

PM CA for RS Date 2/25/22

REPORT ID: 22B225 *EMAX* Laboratories, Inc. 3051 Fujita St., Torrance, CA 90505 Page 4 of 65



10:30

4.5/4.0

REPORT ID: 22B225

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REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than LOQ/RL but greater than LOD/MDL/DL.
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
MDL	Method Detection Limit
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
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.

REPORT ID: 22B225 Page 6 of 65

LABORATORY REPORT FOR

PACE ANALYTICAL

2202145

METHOD E314.0
PERCHLORATE

SDG#: 22B225

REPORT ID: 22B225 Page 7 of 65

CASE NARRATIVE

Client : PACE ANALYTICAL

Project: 2202321

SDG : 22B225

METHOD E314.0
PERCHLORATE

A total of eight(8) water samples were received on 02/24/22 to be analyzed for Perchlorate in accordance with Method E314.0 and project specific requirements.

Holding Time
Samples were 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 out 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. Perchlorate was not detected in PCB003WB. 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. PCB003WL/PCB003WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) MS was analyzed. Percent recovery for Perchlorate was within MS QC limits in B225-01M. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RESULTS

REPORT ID: 22B225

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METHOD E314.0
PERCHLORATE

Client : PACE ANALYTICAL
Project : 2202321
Batch No. : 228225

Matrix : WATER
Instrument ID : 57

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N. FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLKIW	PCB003WB	ND	1	NA	2.00	0.500	1.00	02/25/2210:52	NA	22JB25005	22JB25004	PCB003W	NA	NA
LCSIW	PCB003WL	26.0	1	NA	2.00	0.500	1.00	02/25/2211:37	NA	22JB25007	22JB25004	PCB003W	NA	NA
LCDIW	PCB003WC	26.1	1	NA	2.00	0.500	1.00	02/25/2212:00	NA	22JB25008	22JB25004	PCB003W	NA	NA
2202321-02	B225-01	3.50	1	NA	2.00	0.500	1.00	02/25/2212:43	NA	22JB25010	22JB25009	PCB003W	02/02/2209:30	02/24/22
2202321-02MS	B225-01M	18.2	1	NA	2.00	0.500	1.00	02/25/2213:06	NA	22JB25011	22JB25009	PCB003W	02/02/2209:30	02/24/22
2202321-02DUP	B225-01D	3.31	1	NA	2.00	0.500	1.00	02/25/2213:27	NA	22JB25012	22JB25009	PCB003W	02/02/2209:30	02/24/22
2202321-03	B225-02	3.66	1	NA	2.00	0.500	1.00	02/25/2213:49	NA	22JB25013	22JB25009	PCB003W	02/02/2210:20	02/24/22
2202321-04	B225-03	17.6	1	NA	2.00	0.500	1.00	02/25/2214:10	NA	22JB25014	22JB25009	PCB003W	02/02/2210:55	02/24/22
2202321-06	B225-04	ND	1	NA	2.00	0.500	1.00	02/25/2214:32	NA	22JB25015	22JB25009	PCB003W	02/02/2212:50	02/24/22
2202321-07	B225-05	ND	1	NA	2.00	0.500	1.00	02/25/2214:54	NA	22JB25016	22JB25009	PCB003W	02/02/2213:00	02/24/22
2202321-08	B225-06	5.15	1	NA	2.00	0.500	1.00	02/25/2215:21	NA	22JB25017	22JB25009	PCB003W	02/02/2213:40	02/24/22
2202321-09	B225-07I	164	20	NA	40.0	10.0	20.0	02/25/2216:16	NA	22JB25019	22JB25009	PCB003W	02/02/2214:20	02/24/22
2202321-10	B225-08	ND	1	NA	2.00	0.500	1.00	02/25/2217:00	NA	22JB25021	22JB25020	PCB003W	02/02/2213:50	02/24/22

Note: Detection limits are reported relative to sample result significant figures.

REPORT ID: 22B225

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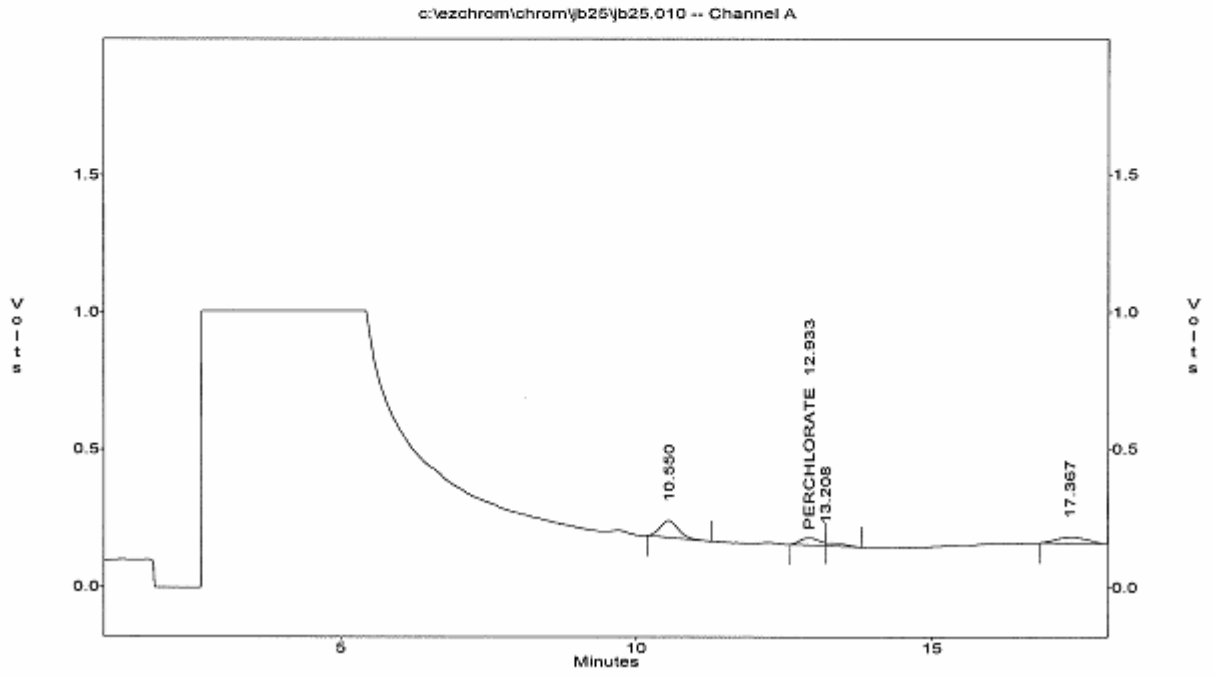
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb25\jb25.010
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : B225-01
Acquired : Feb 25, 2022 12:43:21
Printed : Feb 25, 2022 14:22:49
User : JChun

Channel A Results

#	Peak Name	R.T. (min)	AREA	HEIGHT	Ave. CF	ESTD Conc. (ppb)
2	PERCHLORATE	12.93	573383	25688	171880.766	3.502



REPORT ID: 22B225

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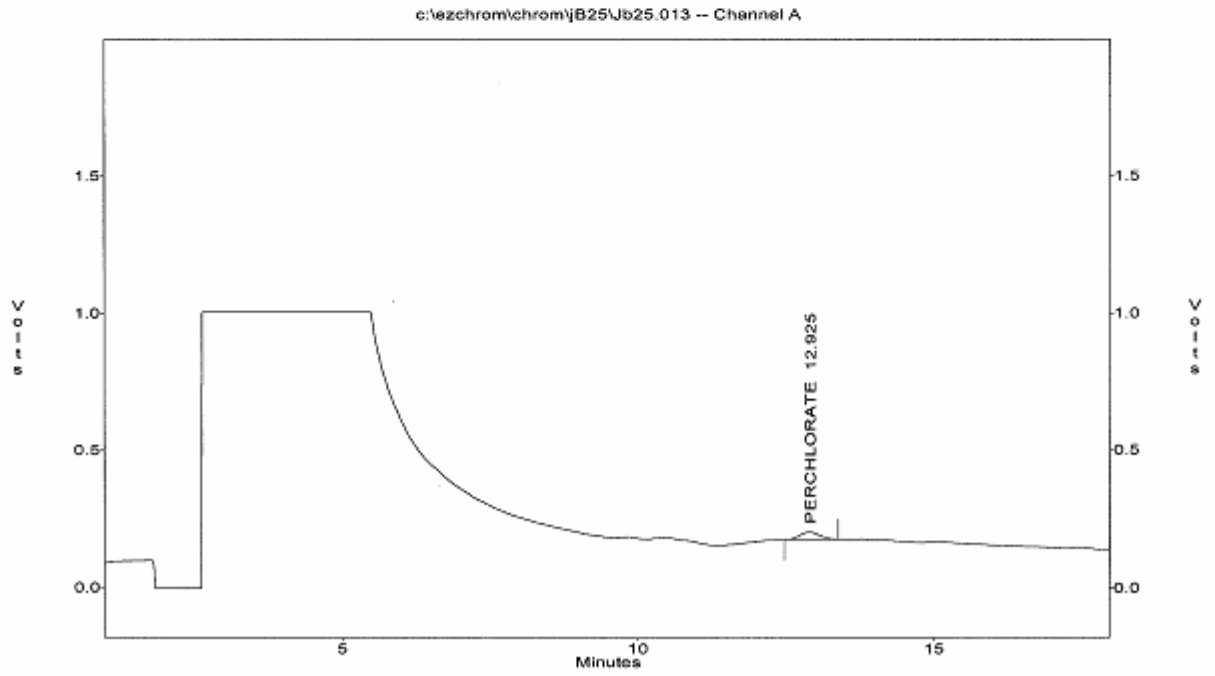
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.013
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B225-02
Acquired : Feb 25, 2022 13:49:20
Printed : Feb 25, 2022 14:10:21
User : JChun

Channel A Results

#	Peak Name	R.T. (min)	AREA	HEIGHT	Ave. CF	ESTD Conc. (ppb)
1	PERCHLORATE	12.93	602568	26319	171880.766	3.662



REPORT ID: 22B225

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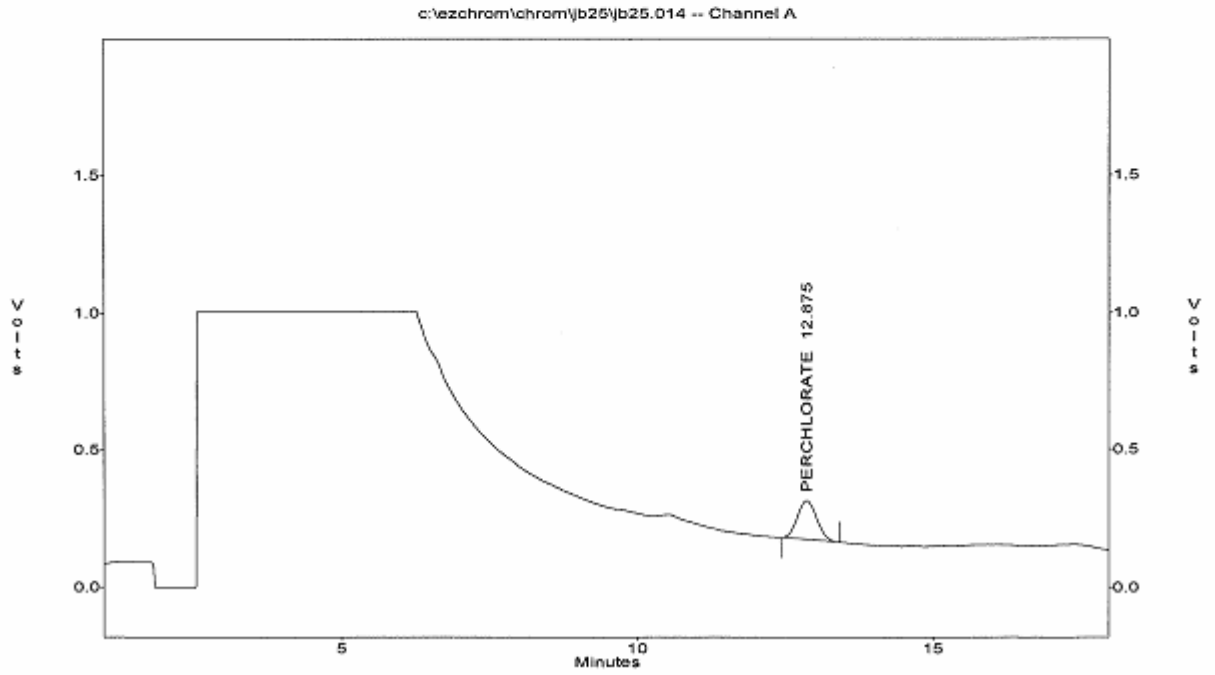
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb25\jb25.014
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : B225-03
Acquired : Feb 25, 2022 14:10:54
Printed : Feb 25, 2022 14:37:58
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	12.88	3151510	139772	171880.766	17.614



REPORT ID: 22B225

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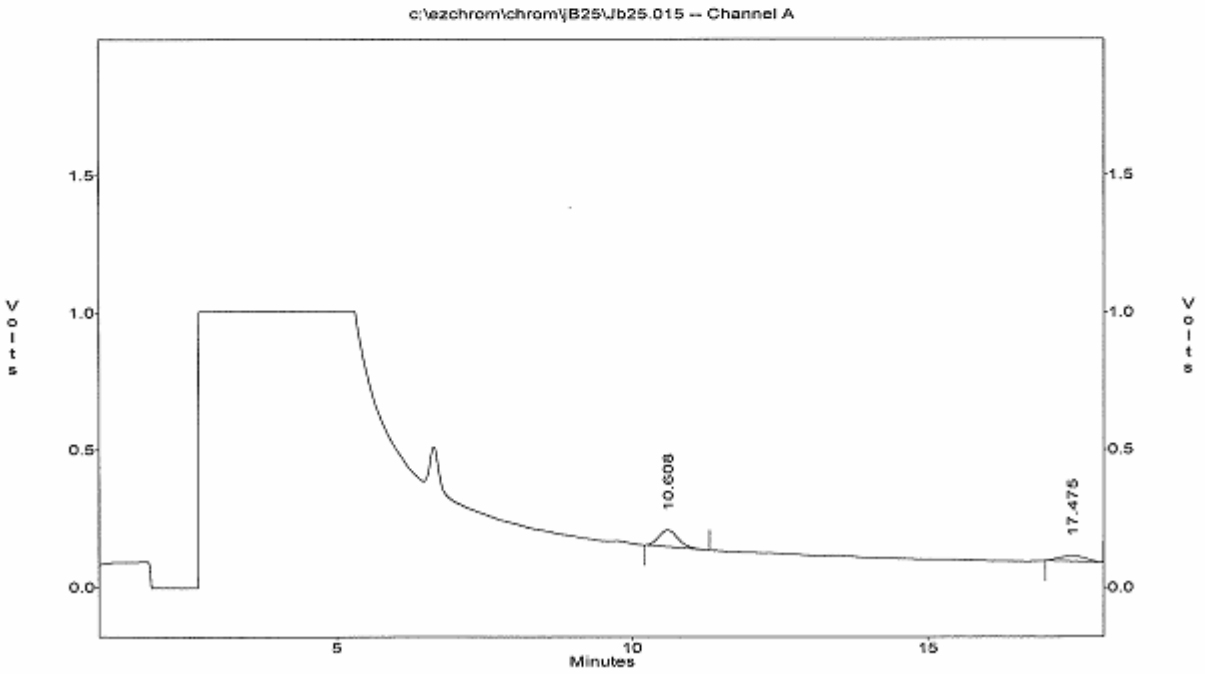
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.015
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B225-04
Acquired : Feb 25, 2022 14:32:57
Printed : Feb 25, 2022 14:53:58
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



REPORT ID: 22B225

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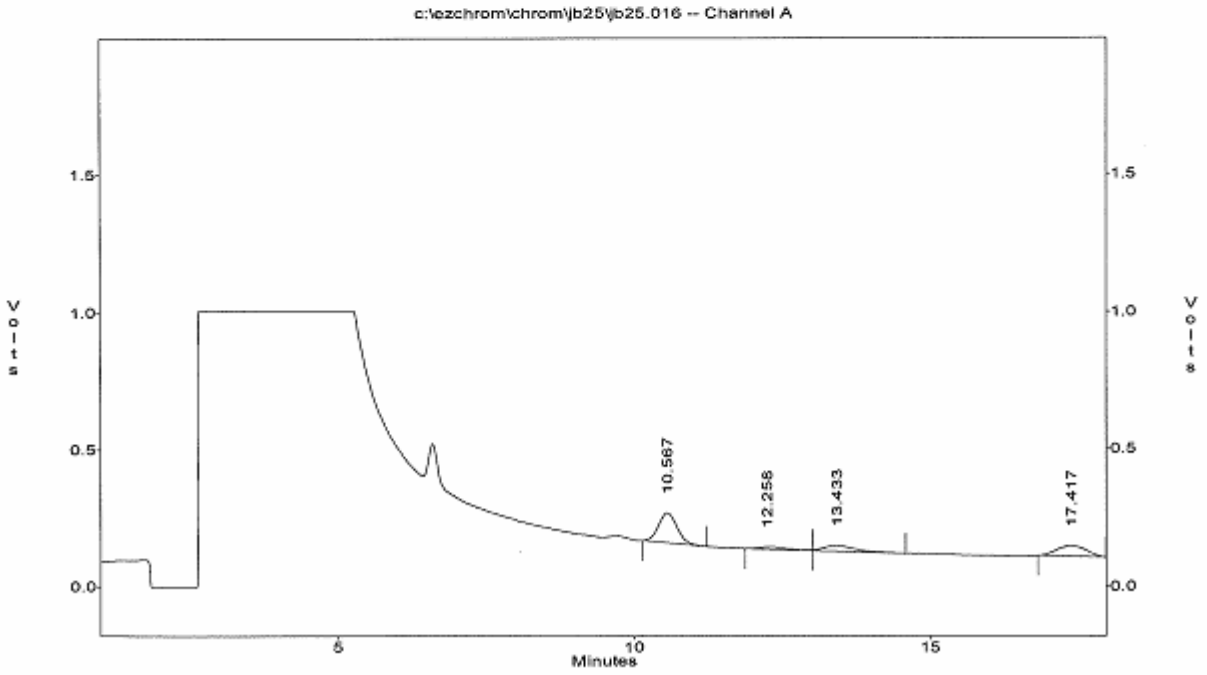
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb25\jb25.016
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : B225-05
Acquired : Feb 25, 2022 14:54:29
Printed : Feb 25, 2022 15:19:09
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



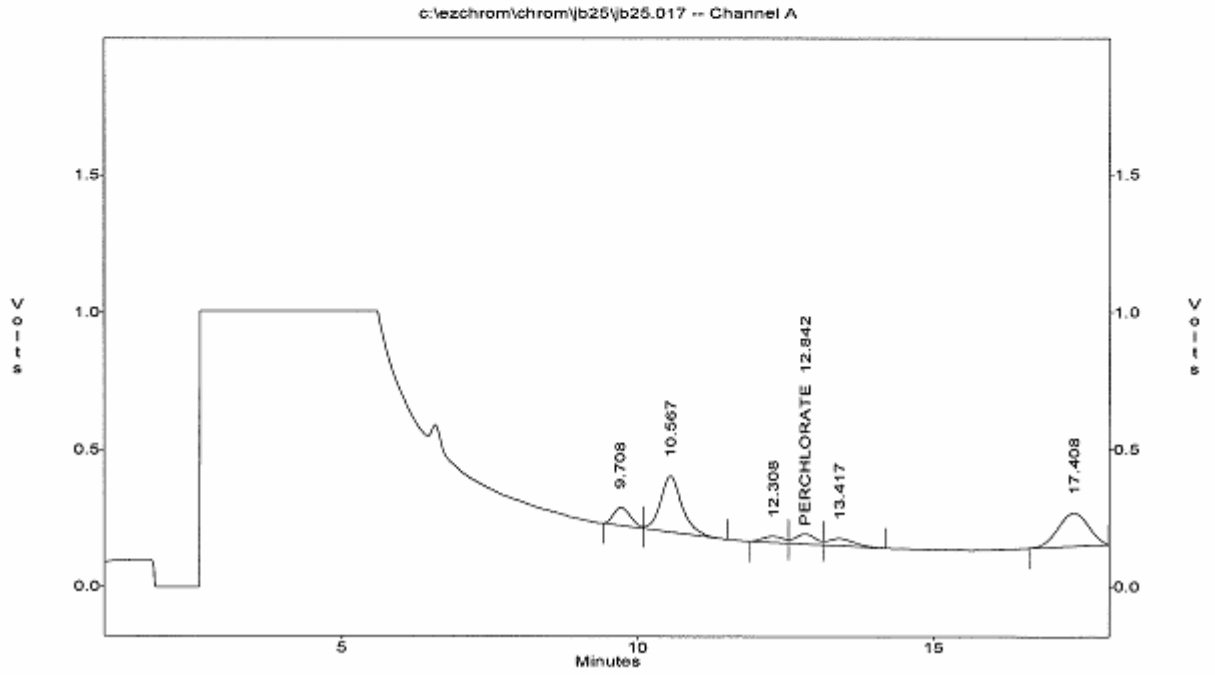
REPORT ID: 22B225

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb25\jb25.017
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : B225-06
Acquired : Feb 25, 2022 15:21:36
Printed : Feb 25, 2022 15:43:13
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
4	PERCHLORATE	12.84	874032	36628	171880.766	5.148



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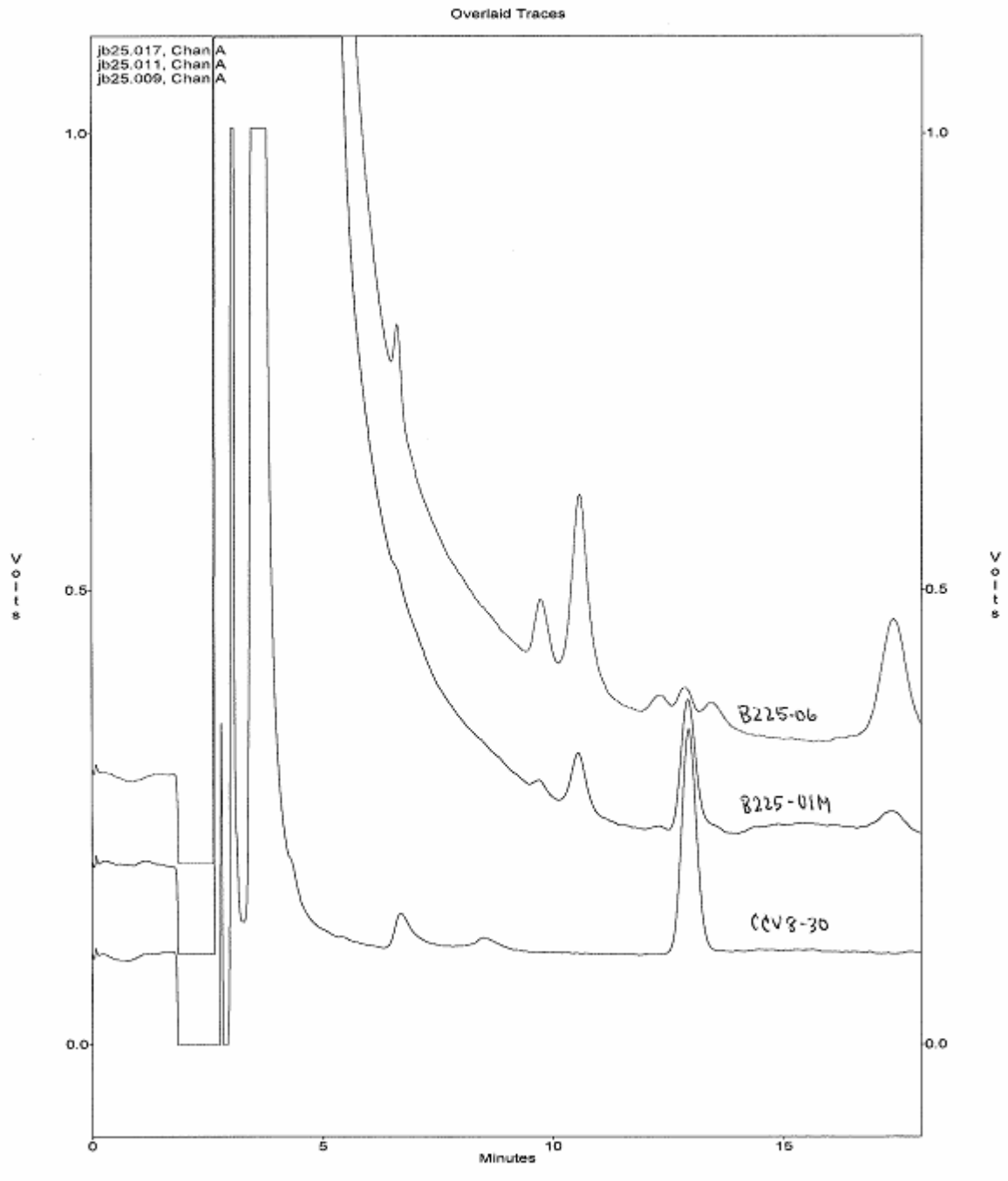

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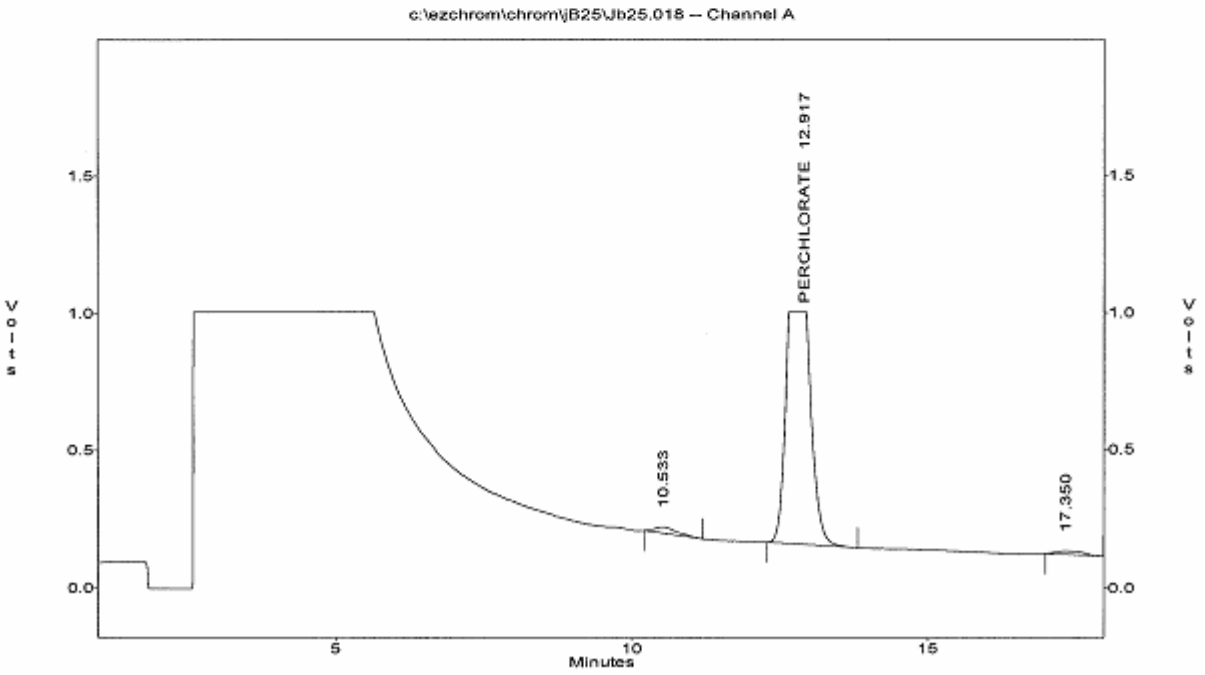
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.018
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B225-07
Acquired : Feb 25, 2022 15:53:43
Printed : Feb 25, 2022 16:14:44
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
2	PERCHLORATE	12.92	25291988	845990	171880.766	138.806



REPORT ID: 22B225

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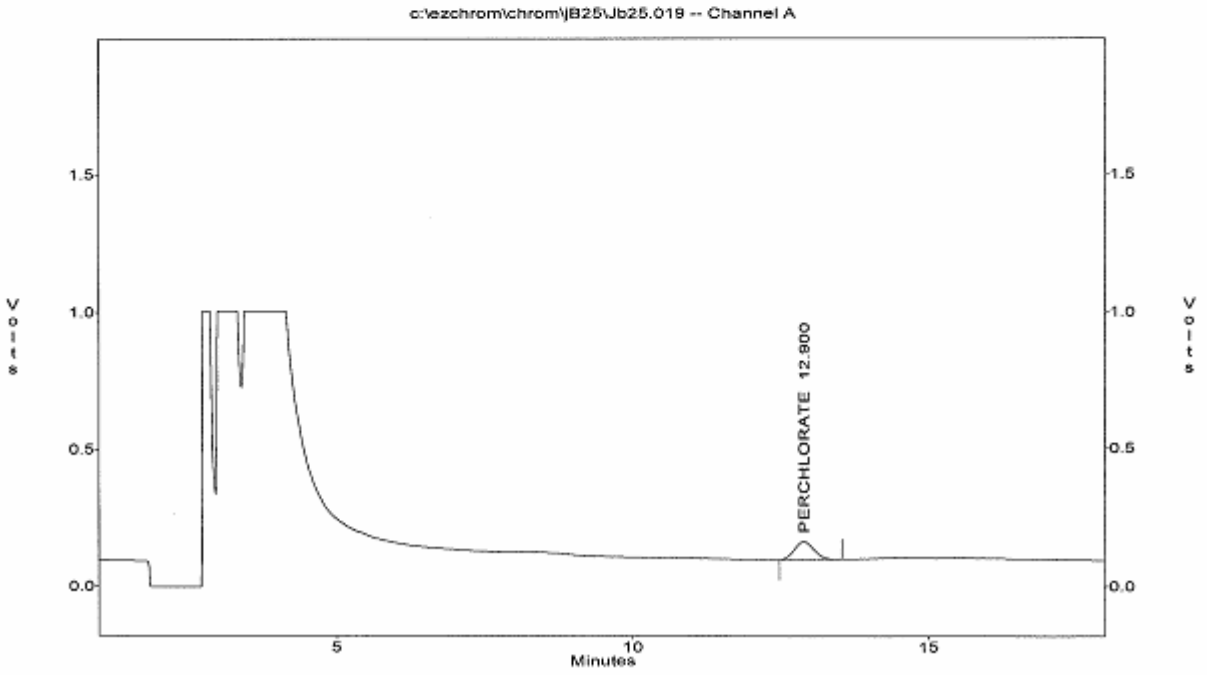
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.019
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B225-07I DF=20
Acquired : Feb 25, 2022 16:16:54
Printed : Feb 25, 2022 16:37:55
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	12.90	1430685	64608	171880.766	163.900



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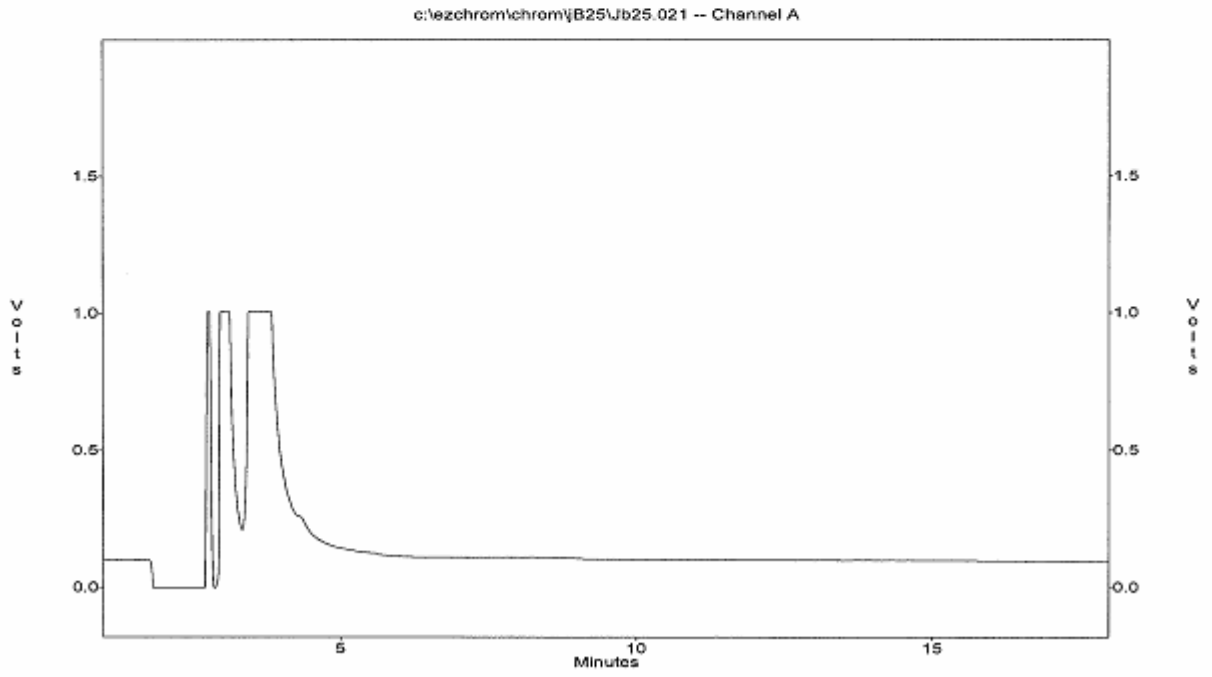
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.021
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : B225-08
Acquired : Feb 25, 2022 17:00:17
Printed : Feb 25, 2022 17:21:18
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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QC SUMMARIES

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EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : PACE ANALYTICAL
PROJECT : 2202321
BATCH NO. : 22B225
METHOD : E314.0

MATRIX : WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID :	MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID :	PCB003WB	PCB003WL	PCB003WC
LAB FILE ID :	22JB25005	22JB25007	22JB2500B
DATE PREPARED :	NA	NA	NA
DATE ANALYZED :	02/25/2210:52	02/25/2211:37	02/25/2212:00
PREP BATCH :	PCB003W	PCB003W	PCB003W
CALIBRATION REF:	22JB25004	22JB25004	22JB25004

ACCESSION:

PARAMETER	MB RESULT (ug/L)	SPIKE AMT (ug/L)	BS RESULT (ug/L)	BS REC (%)	SPIKE AMT (ug/L)	BSD RESULT (ug/L)	BSD REC (%)	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Perchlorate	ND	25	26.0	104	25	26.1	104	0	85-115	15

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EMAX QUALITY CONTROL DATA
SAMPLE DUPLICATE ANALYSIS

CLIENT : PACE ANALYTICAL
PROJECT : 2202321
BATCH NO. : 22B225
METHOD : E314.0

MATRIX	: WATER	
DILUTION FACTOR	: 1	1
SAMPLE ID	: 2202321-02	2202321-02DUP
LAB SAMPLE ID	: B225-01	B225-01D
LAB FILE ID	: 22JB25010	22JB25012
DATE PREPARED	: NA	NA
DATE ANALYZED	: 02/25/2212:43	02/25/2213:27
PREP BATCH	: PCB003W	PCB003W
CALIBRATION REF	: 22JB25009	22JB25009

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	DUP RESULT (ug/L)	RPD (%)	MAX RPD (%)
Perchlorate	3.50	3.31	6	15

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EMAX QUALITY CONTROL DATA
MATRIX SPIKE ANALYSIS

CLIENT : PACE ANALYTICAL
PROJECT : 2202321
BATCH NO. : 228225
METHOD : E314.0

MATRIX	: WATER	% MOISTURE: NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: 2202321-02	2202321-02MS
LAB SAMPLE ID	: B225-01	B225-01N
LAB FILE ID	: 22JB25010	22JB25011
DATE PREPARED	: NA	NA
DATE ANALYZED	: 02/25/2212:43	02/25/2213:06
PREP BATCH	: PCB003W	PCB003W
CALIBRATION REF	: 22JB25009	22JB25009

ACCESSION:

PARAMETER	PARENT RESULT (ug/L)	SPIKE AMT (ug/L)	MS RESULT (ug/L)	MS REC (%)	QC LIMIT (%)
Perchlorate	3.50	15.00	18.2	98	80-120

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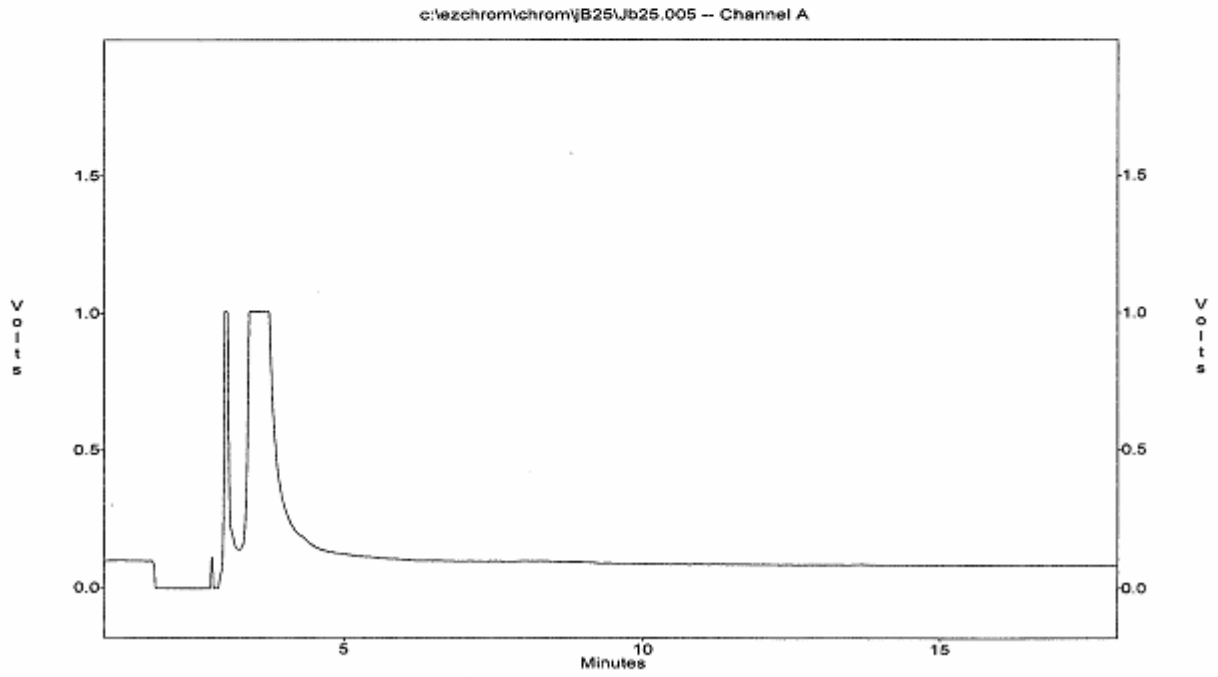
QC DATA

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.005
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : PCB003WB
Acquired : Feb 25, 2022 10:52:49
Printed : Feb 25, 2022 11:13:50
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



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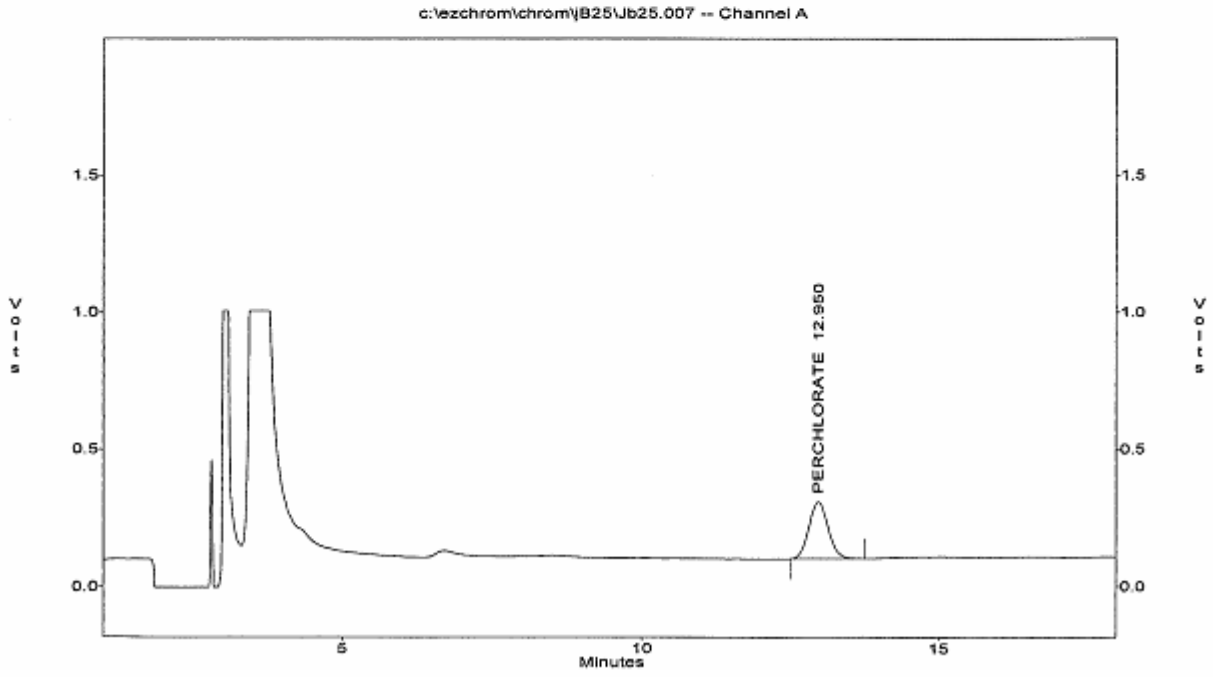
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.007
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : PCB003WL
Acquired : Feb 25, 2022 11:37:51
Printed : Feb 25, 2022 11:58:53
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)	A/H
1	PERCHLORATE	12.95	4687695	206561	171880.766	26.023	22.694

$$PD_{A/H} = \frac{|25.472 - 22.694|}{22.694} \times 100 = 12\%$$



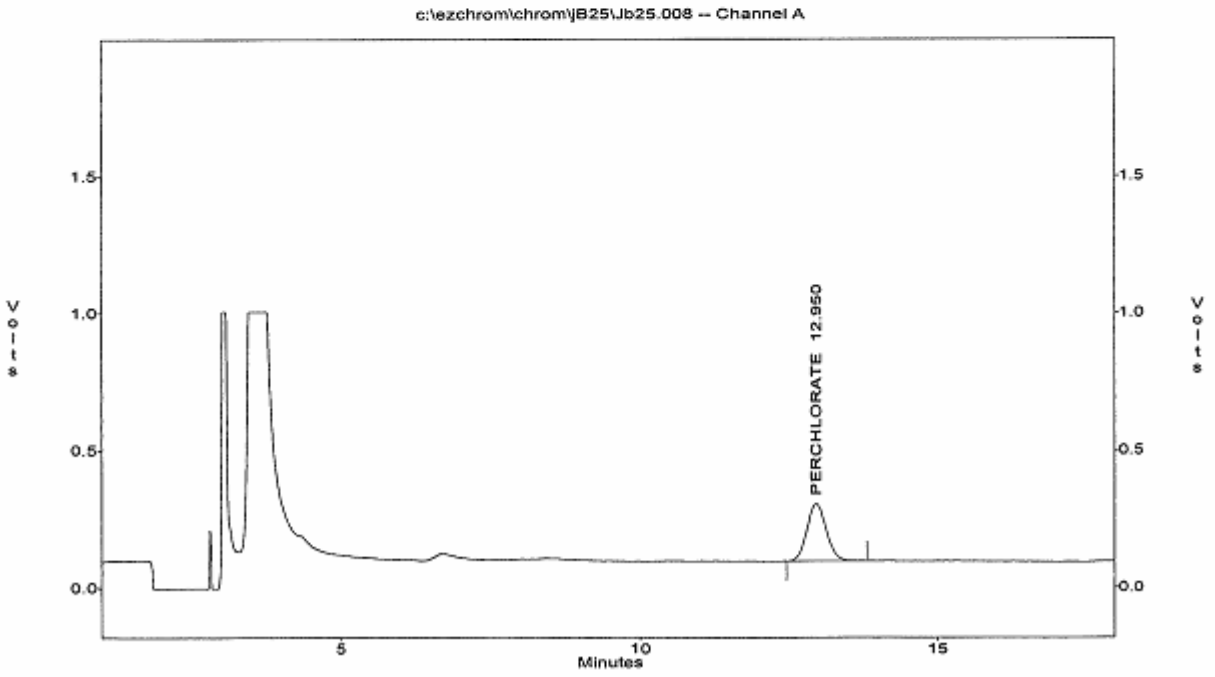
REPORT ID: 22B225

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.008
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : PCB003WC
Acquired : Feb 25, 2022 12:00:12
Printed : Feb 25, 2022 12:21:13
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	12.95	4708709	208636	171880.766	26.138



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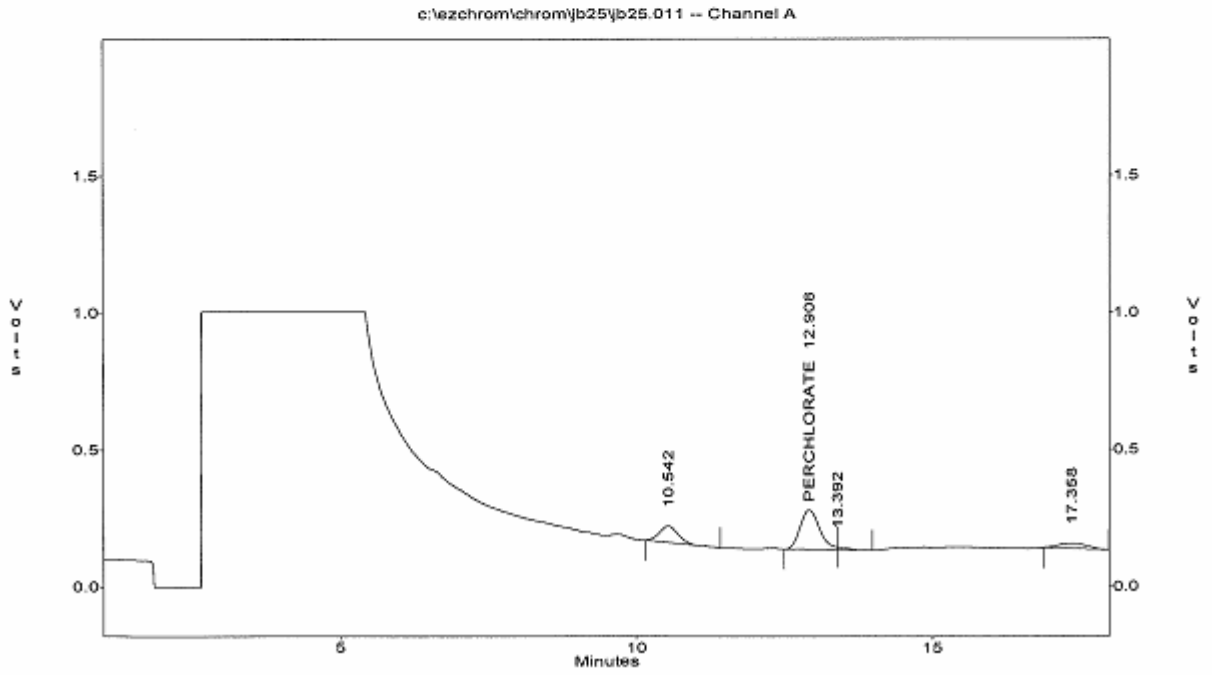
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb25\jb25.011
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : B225-01M
Acquired : Feb 25, 2022 13:06:17
Printed : Feb 25, 2022 14:37:02
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
2	PERCHLORATE	12.91	3260914	143883	171880.766	18.213



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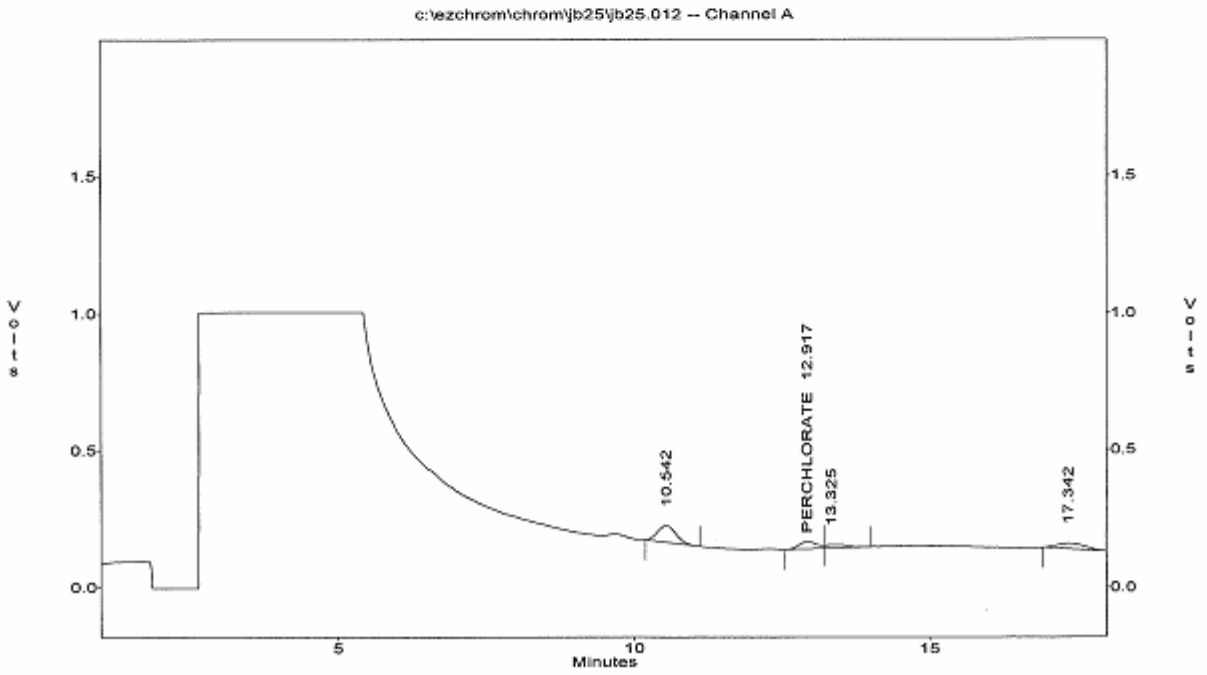
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb25\jb25.012
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : B225-01D
Acquired : Feb 25, 2022 13:27:53
Printed : Feb 25, 2022 14:16:19
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
2	PERCHLORATE	12.92	539017	25674	171880.766	3.314



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INITIAL CALIBRATION

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IC SEQ FORM (ESD)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
JB22001	IB	P	IC57B22	02/22/2215:17	1
JB22002	S0	P	IC57B22	02/22/2215:39	1
JB22003	S1	P	IC57B22	02/22/2216:02	1
JB22004	S2	P	IC57B22	02/22/2216:24	1
JB22005	S3	P	IC57B22	02/22/2216:46	1
JB22006	S4	P	IC57B22	02/22/2217:07	1
JB22007	S5	P	IC57B22	02/22/2217:29	1
JB22008	ICV	P	IC57B22	02/22/2218:11	1
JB22009	ICB	P	IC57B22	02/22/2218:35	1

IC57B22.MET

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IC RESULT FORM CalVersion: PCHLO314.B22/JB22(2022)

LFID	LSID	SELCOMP	PERCHLORATE	DateTime	Df
JB22001	IB	P	.000	02/22/2215:17	1
JB22002	S0	P	.000	02/22/2215:39	1
JB22003	S1	P	2	02/22/2216:02	1
JB22004	S2	P	4	02/22/2216:24	1
JB22005	S3	P	10	02/22/2216:46	1
JB22006	S4	P	25	02/22/2217:07	1
JB22007	S5	P	30	02/22/2217:29	1
JB22008	ICV	P	101%	02/22/2218:11	1
JB22009	ICB	P	.000	02/22/2218:35	1

IC57B22.MET

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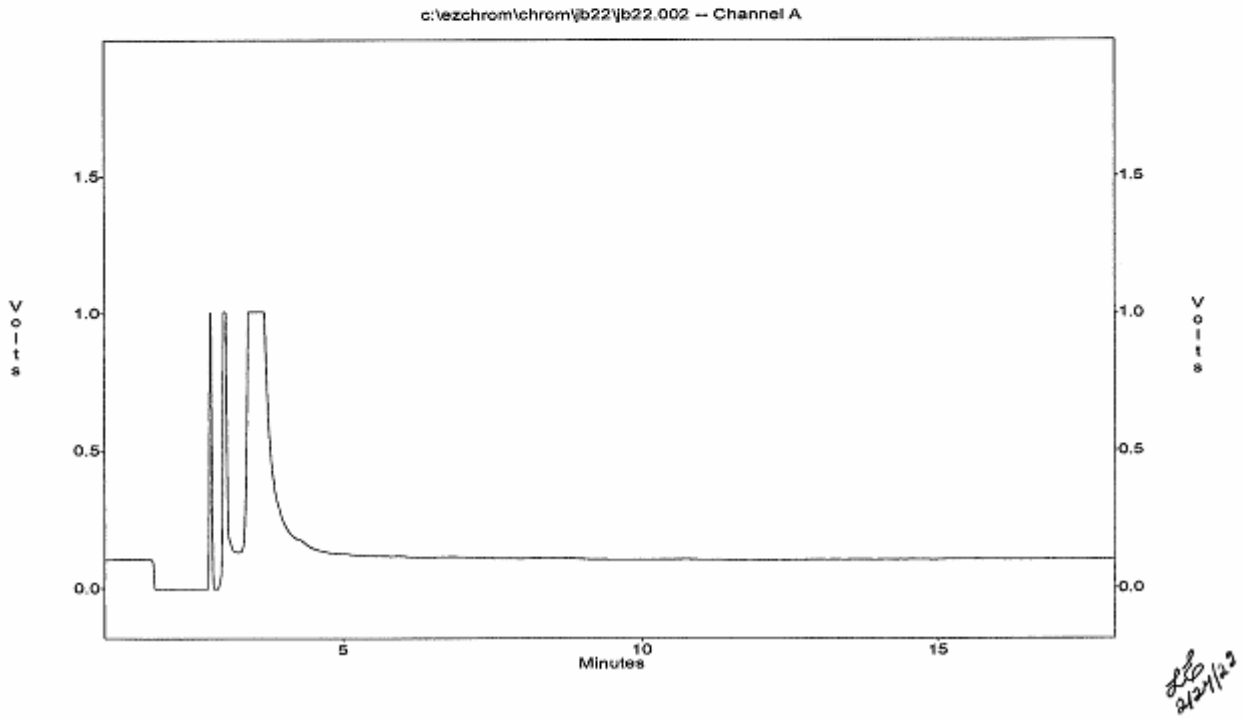
2/24/22

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.002
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S0
Acquired : Feb 22, 2022 15:39:54
Printed : Feb 22, 2022 20:34:23
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



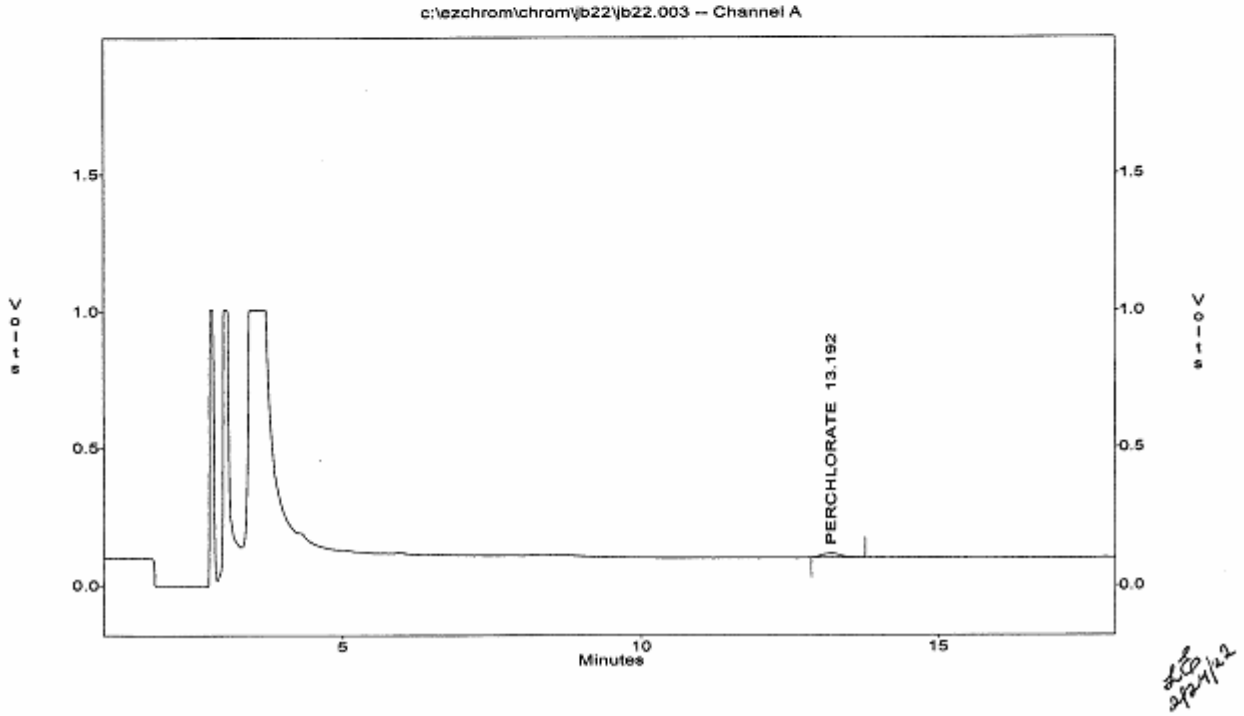
REPORT ID: 22B225

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.003
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S1
Acquired : Feb 22, 2022 16:02:53
Printed : Feb 22, 2022 20:34:41
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.19	314112	14924	171880.766	2.000



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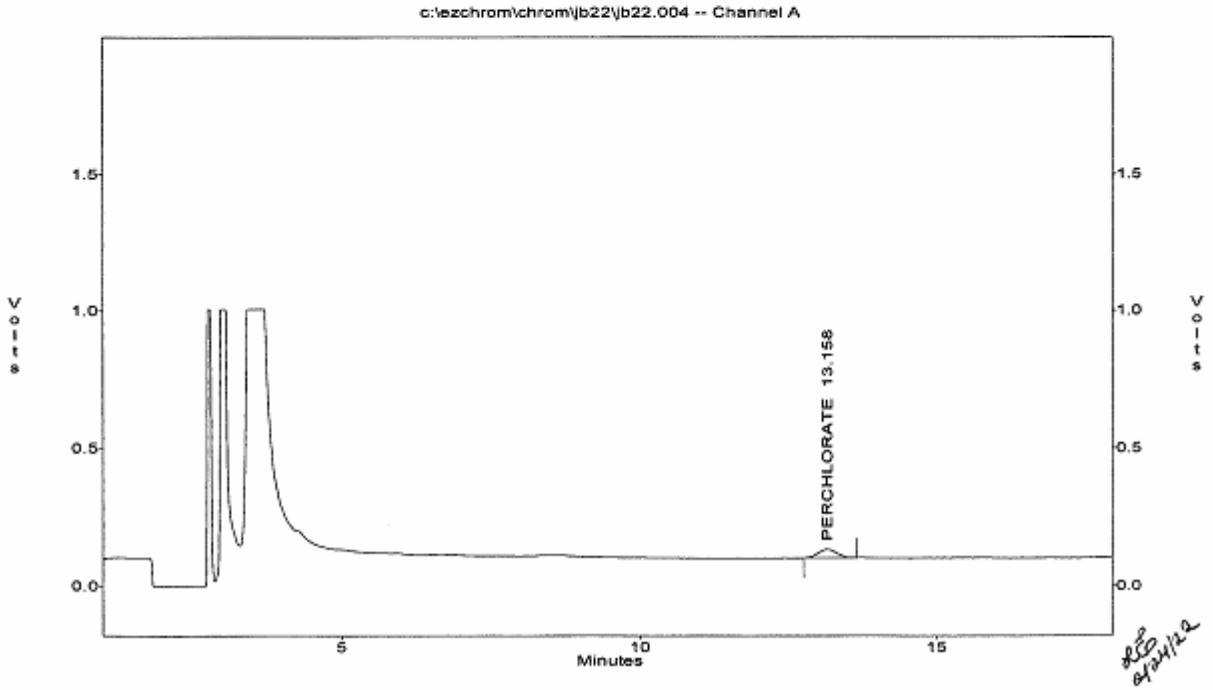
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.004
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S2
Acquired : Feb 22, 2022 16:24:31
Printed : Feb 22, 2022 20:34:55
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.16	676753	30740	171880.766	4.000



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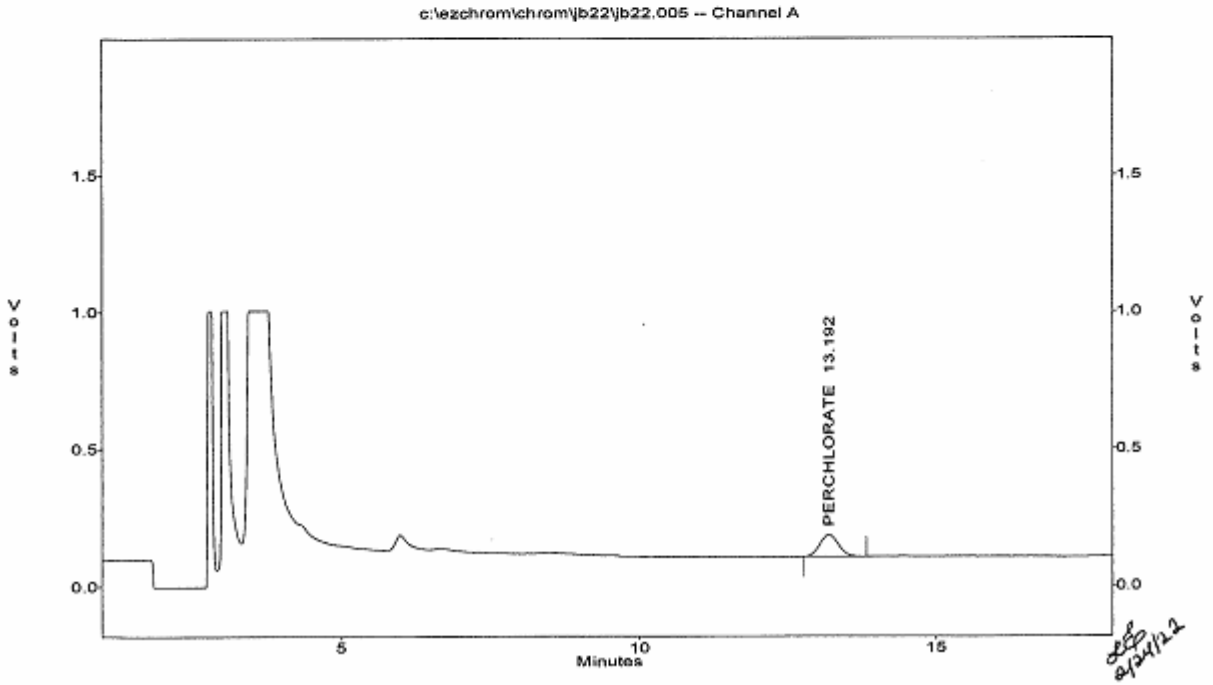
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.005
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S3
Acquired : Feb 22, 2022 16:46:11
Printed : Feb 22, 2022 20:35:13
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.19	1723326	78581	171880.766	10.000



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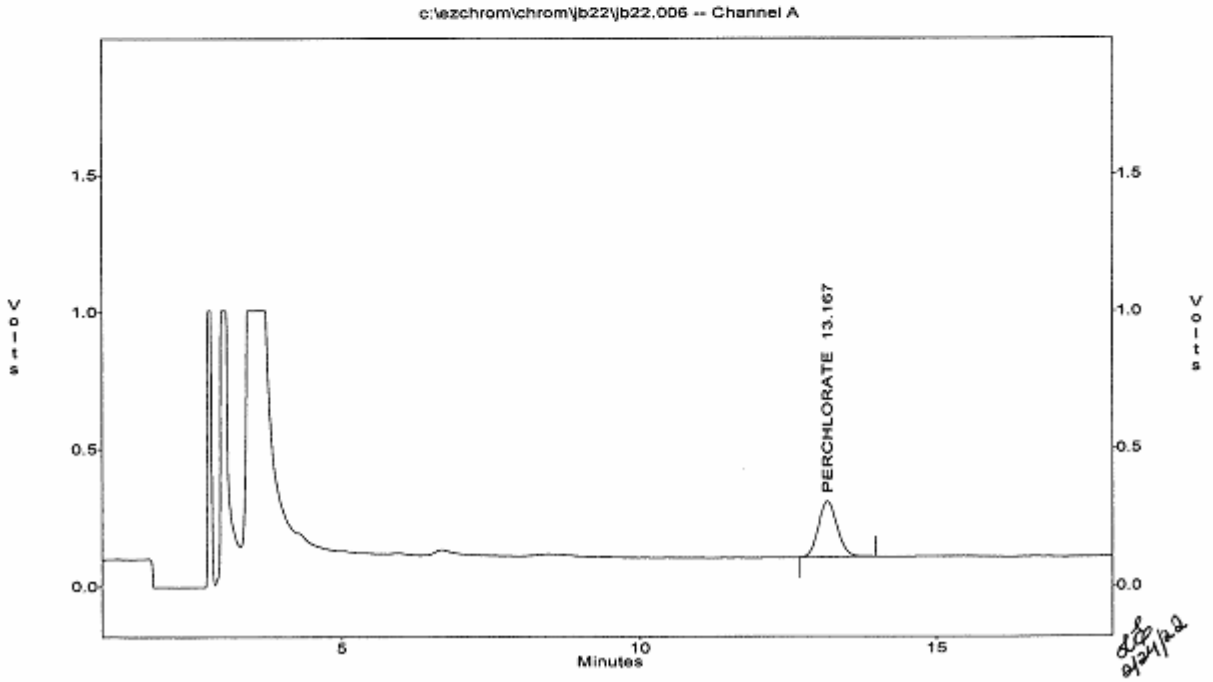
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.006
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S4
Acquired : Feb 22, 2022 17:07:43
Printed : Feb 22, 2022 20:35:27
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.17	4501513	201196	171880.766	25.000



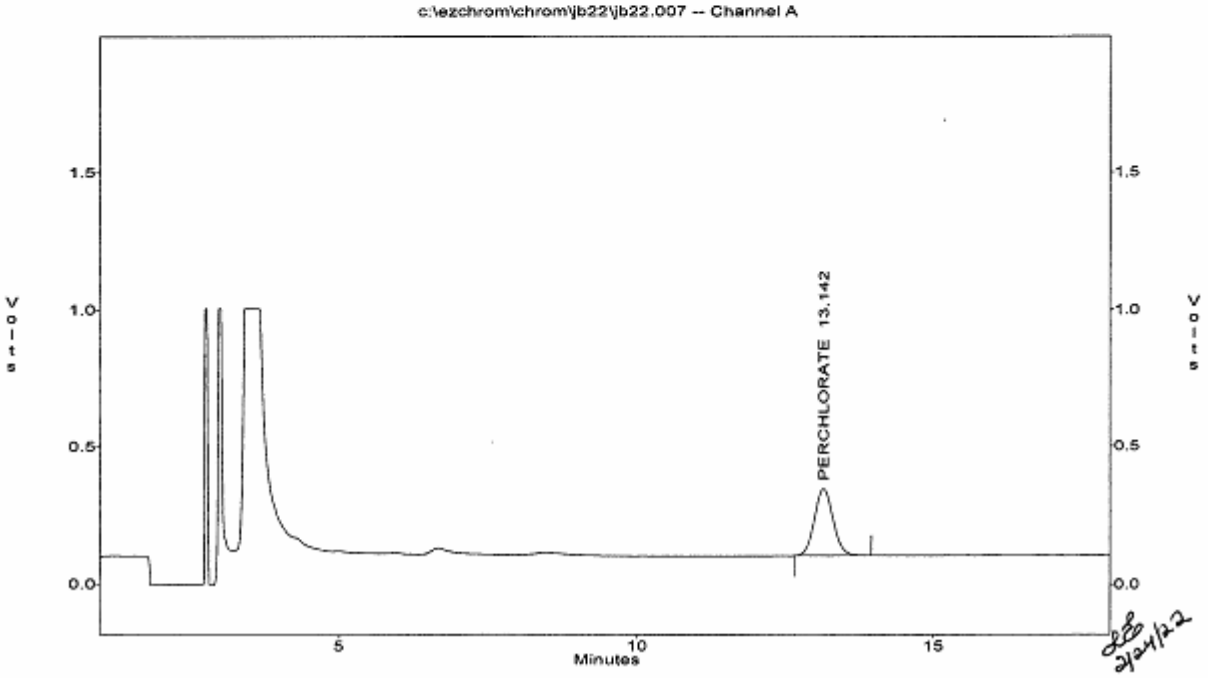
REPORT ID: 22B225

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jb22\jb22.007
Method : c:\ezchrom\methods\ic57b22.met
Sample ID : S5
Acquired : Feb 22, 2022 17:29:59
Printed : Feb 22, 2022 20:35:39
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.14	5422993	242055	171880.766	30.000



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Method : c:\ezchrom\methods\ic57b22.met
Printed : Feb 22, 2022 20:37:06
Channel : A
Peak : PERCHLORATE

* - Replicate Not Used

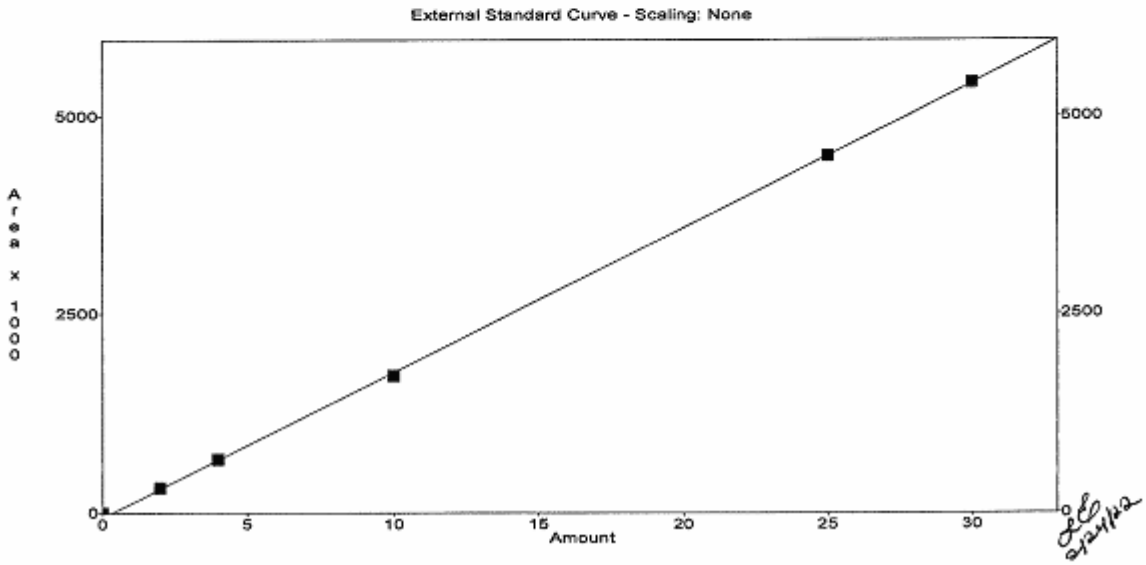
Level	Area	Amount	RF	Rep Area 1	Rep Area 2	Rep Area 3	Rep Area 4	Rep Area 5	Replic STD	Replic %RSD	Old Area
2	314112	2	157056.00	314112							0
3	676753	4	169188.25	676753							0
4	1723326	10	172332.59	1723326							0
5	4501513	25	180060.52	4501513							0
6	5422993	30	180766.44	5422993							0

Calib Flag: Replace

Average RF: 171881
RF StdDev: 9657.78
RF %RSD: 5.619

RF Definition: Area / Amount
Weighting Method: None
Fit Through Zero: No

Linear Fit: Amount = 5.47377e-006 x Area + 0.363742
R^2 = 0.999913



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SECOND SOURCE VERIFICATION

REPORT ID: 22B225

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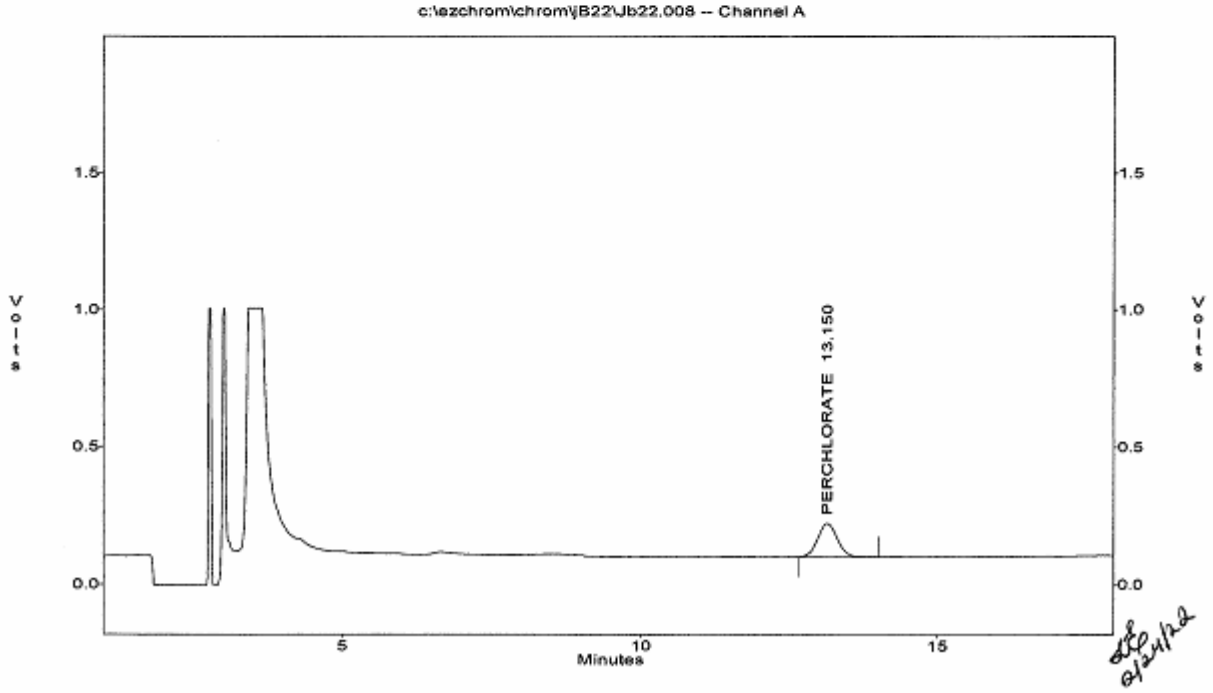
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.008
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : ICV
Acquired : Feb 22, 2022 18:11:46
Printed : Feb 22, 2022 18:32:47
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	13.15	2710563	121104	171880.766	15.201



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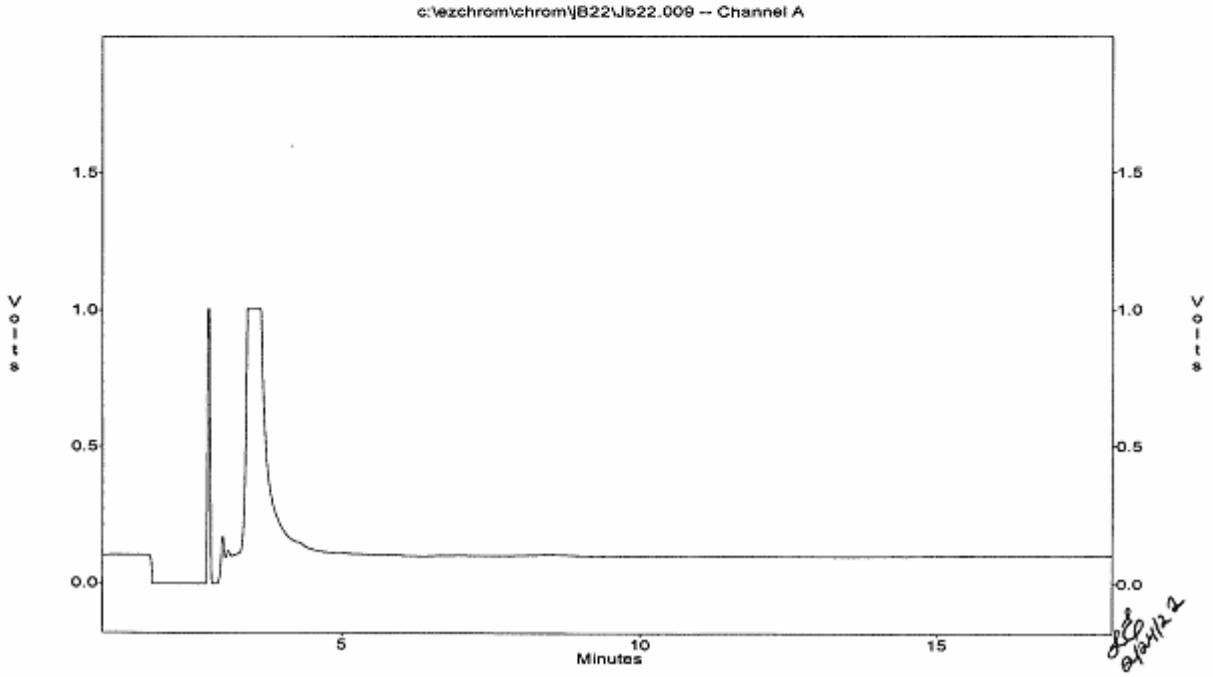
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB22\Jb22.009
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : ICB
Acquired : Feb 22, 2022 18:35:45
Printed : Feb 22, 2022 18:56:46
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	13.17	0	0	0.000	0.000



REPORT ID: 22B225

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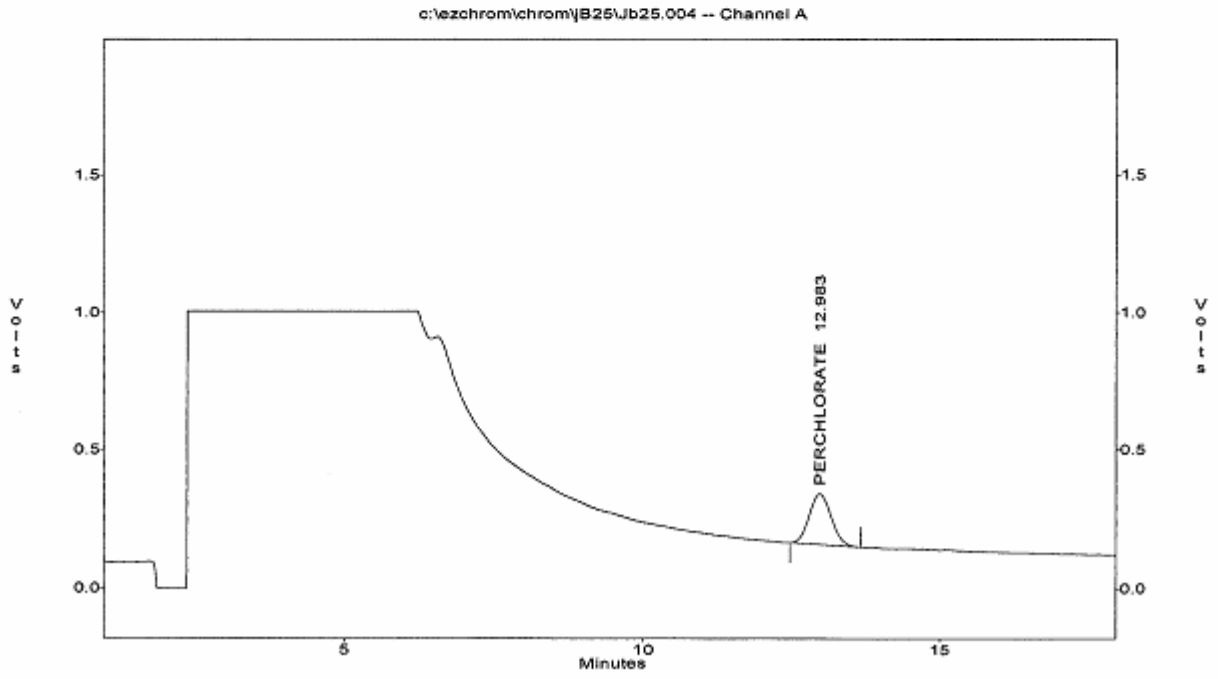
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.004
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : IPCS 300/25
Acquired : Feb 25, 2022 10:30:35
Printed : Feb 25, 2022 10:51:36
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	12.98	4636092	182007	171880.766	25.741

M/H
25.472



REPORT ID: 22B225

DAILY CALIBRATIONS

REPORT ID: 22B225 Page 45 of 65

Continuing Calibration Summary Form

Client : PACE ANALYTICAL
Project : 2202321
SDG : 22B225
Method : METHOD E314.0
Parameter: Perchlorate

LFID	LSID	%Rec	AnalysisDateTime
22JB25009	CCV8-30	102	02/25/2212:21
22JB25020	CCV9-15	102	02/25/2216:38
22JB25022	CCV10-30	105	02/25/2217:24

IPCS Acceptance Criteria: 80-120%
CCV Acceptance Criteria: 85-115%

IC SEQ FORM (ESD)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
JB25001	RINSE	P	IC57B22	02/25/2209:23	1
JB25002	RINSE	P	IC57B22	02/25/2209:46	1
JB25003	RINSE	P	IC57B22	02/25/2210:08	1
JB25004	IPCS	P	IC57B22	02/25/2210:30	1
JB25005	PCB003WB	P	IC57B22	02/25/2210:52	1
JB25006	MRL82501	P	IC57B22	02/25/2211:14	1
JB25007	PCB003WL	P	IC57B22	02/25/2211:37	1
JB25008	PCB003WC	P	IC57B22	02/25/2212:00	1
JB25009	CCV8-30	P	IC57B22	02/25/2212:21	1
JB25010	B225-01	P	IC57B22	02/25/2212:43	1
JB25011	B225-01M	P	IC57B22	02/25/2213:06	1
JB25012	B225-01D	P	IC57B22	02/25/2213:27	1
JB25013	B225-02	P	IC57B22	02/25/2213:49	1
JB25014	B225-03	P	IC57B22	02/25/2214:10	1
JB25015	B225-04	P	IC57B22	02/25/2214:32	1
JB25016	B225-05	P	IC57B22	02/25/2214:54	1
JB25017	B225-06	P	IC57B22	02/25/2215:21	1
JB25018	B225-07	*	IC57B22	02/25/2215:53	1
JB25019	B225-07I	P	IC57B22	02/25/2216:16	20
JB25020	CCV9-15	P	IC57B22	02/25/2216:38	1
JB25021	B225-08	P	IC57B22	02/25/2217:00	1
JB25022	CCV10-30	P	IC57B22	02/25/2217:24	1

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IC RESULT FORM CalVersion: PCHLO314.B22/JB22(2022)

LFID	LSID	SELCOMP	PERCHLORATE	DateTime	Df
JB25001	RINSE	P	.000	02/25/2209:23	1
JB25002	RINSE	P	.000	02/25/2209:46	1
JB25003	RINSE	P	.000	02/25/2210:08	1
JB25004	IPCS	P	103%	02/25/2210:30	1
JB25005	PCB003WB	P	.000	02/25/2210:52	1
JB25006	MRLB2501	P	103%	02/25/2211:14	1
JB25007	PCB003WL	P	26	02/25/2211:37	1
JB25008	PCB003WC	P	26.1	02/25/2212:00	1
JB25009	CCV8-30	P	102%	02/25/2212:21	1
JB25010	B225-01	P	3.5	02/25/2212:43	1
JB25011	B225-01M	P	18.2	02/25/2213:06	1
JB25012	B225-01D	P	3.31	02/25/2213:27	1
JB25013	B225-02	P	3.66	02/25/2213:49	1
JB25014	B225-03	P	17.6	02/25/2214:10	1
JB25015	B225-04	P	.000	02/25/2214:32	1
JB25016	B225-05	P	.000	02/25/2214:54	1
JB25017	B225-06	P	5.15	02/25/2215:21	1
JB25018	B225-07	*	139E	02/25/2215:53	1
JB25019	B225-07I	P	164	02/25/2216:16	20
JB25020	CCV9-15	P	102%	02/25/2216:38	1
JB25021	B225-08	P	.000	02/25/2217:00	1
JB25022	CCV10-30	P	105%	02/25/2217:24	1

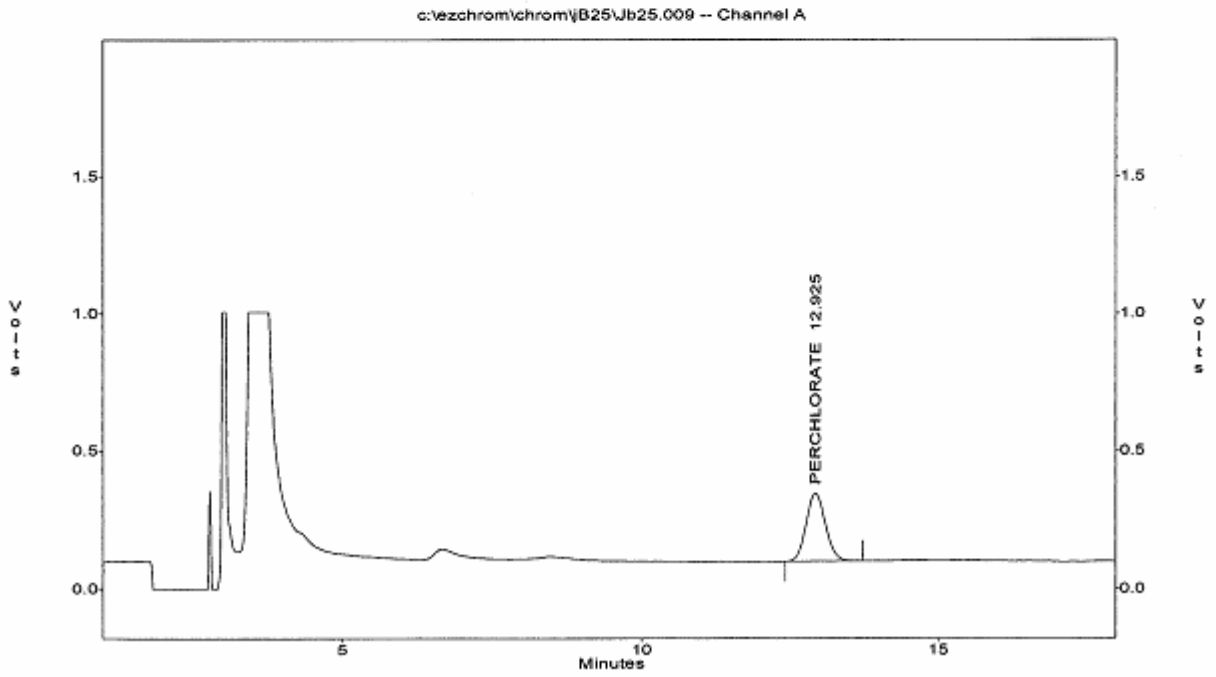
REPORT ID: 22B225 Page 48 of 65

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.009
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : CCV8-30
Acquired : Feb 25, 2022 12:21:48
Printed : Feb 25, 2022 12:42:50
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	12.93	5539776	246025	171880.766	30.687



REPORT ID: 22B225

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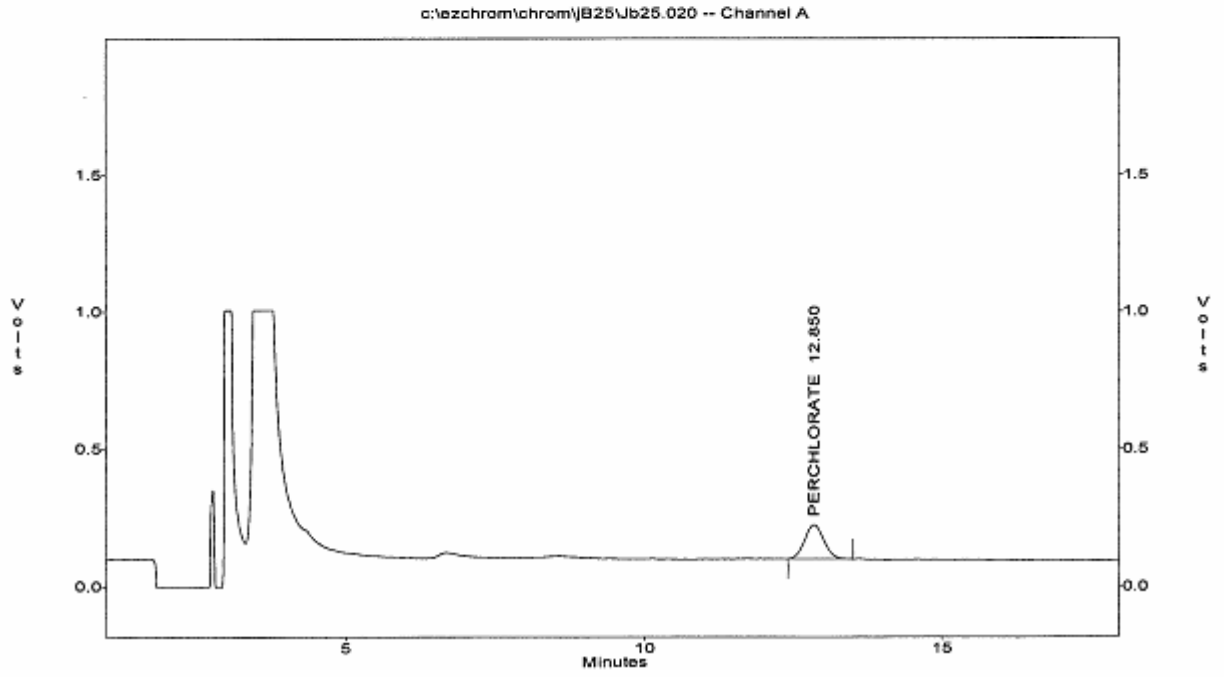
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.020
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : CCV9-15
Acquired : Feb 25, 2022 16:38:25
Printed : Feb 25, 2022 16:59:26
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	12.85	2726832	124053	171880.766	15.290



REPORT ID: 22B225

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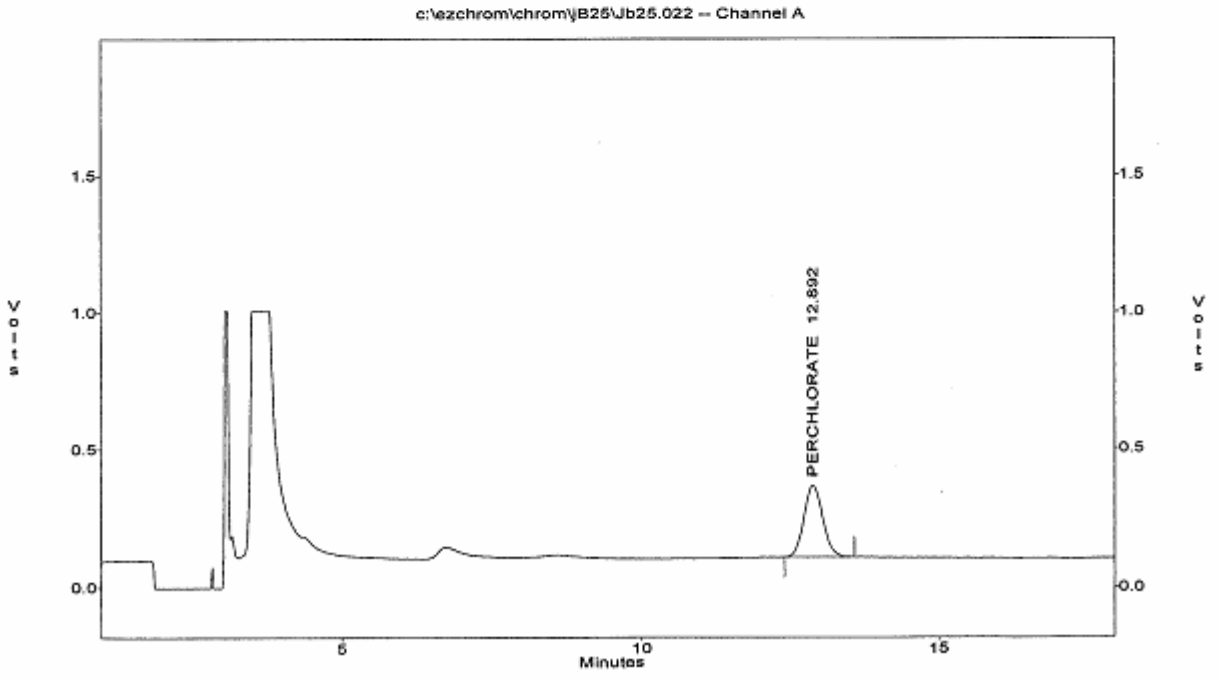
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jB25\Jb25.022
Method : c:\ezchrom\methods\Ic57b22.met
Sample ID : CCV10-30
Acquired : Feb 25, 2022 17:24:25
Printed : Feb 25, 2022 17:45:26
User : JChun

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
1	PERCHLORATE	12.89	5674508	256698	171880.766	31.425



REPORT ID: 22B225

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ANALYTICAL LOG(S)

REPORT ID: 22B225

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EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples and relavent QCs/Standards analyzed, refer to attached analytical sequence.

Eluent: NaOH (5.54 g) → 2 L Reagent Water SWR1-02-18-04

Reagent Water ID #: SWIR-011-06-08

Guard II	ID	NA
Ba		✓
Ag		✓
H		✓

Conductivity Meter Calibration

Conductivity Meter ID: DH

Standard ID	TV (µS/cm)	Reading (µS/cm)
SWIA-03-04-04	1000	1000
SWIA-03-04-01	100,032	100,000
CMC Reading (Acceptance criteria: ± 30)		
SWIA-03-04-07	1410	1412

Temperature: 25 °C Thermometer ID: 181179499

Comments:

Linear Range (ppb): S_0 — 0
S_1 — 2.0
S_2 — 4.0
S_3 — 10.0
S_4 — 25.0
S_5 — 30.0
ICV — 15.0

Column: Dionex Ion Pac AS16 (4x250mm) #210505287
Guard Column: Dionex Ion Pac AG16 (4x50mm) #210308037
Flow: 1.50 mL/min Sample Loop: 1.0 mL
Suppressor: Dionex AERS 500 (4mm) #178111035

Snapseal container
0.45 µm filter lot #: 4 oz; lot #;2106023-1326-1W
0.2 µm filter lot #: 1.5 oz; lot #;

Book #:	A57-038
Instrument No.:	57
CMC Instrument No.:	29
Pipette ID:	SW9A-04-17
	A42762405
	SW9A-04-052
Balance ID:	10601202
Analytical Sequence:	JB22
Method File:	IC57B22
Analytical Batch:	

SOP #	Rev. #
☐ EMAX-300M	4
☑ EMAX-314.0	5
☐ EMAX-	

STANDARDS ID	
ICAL	SW48-003-06-01
ICV	SW48-003-06-02
CCV-15	
CCV-30	
LCS	
IPC	
MRL	
MS	

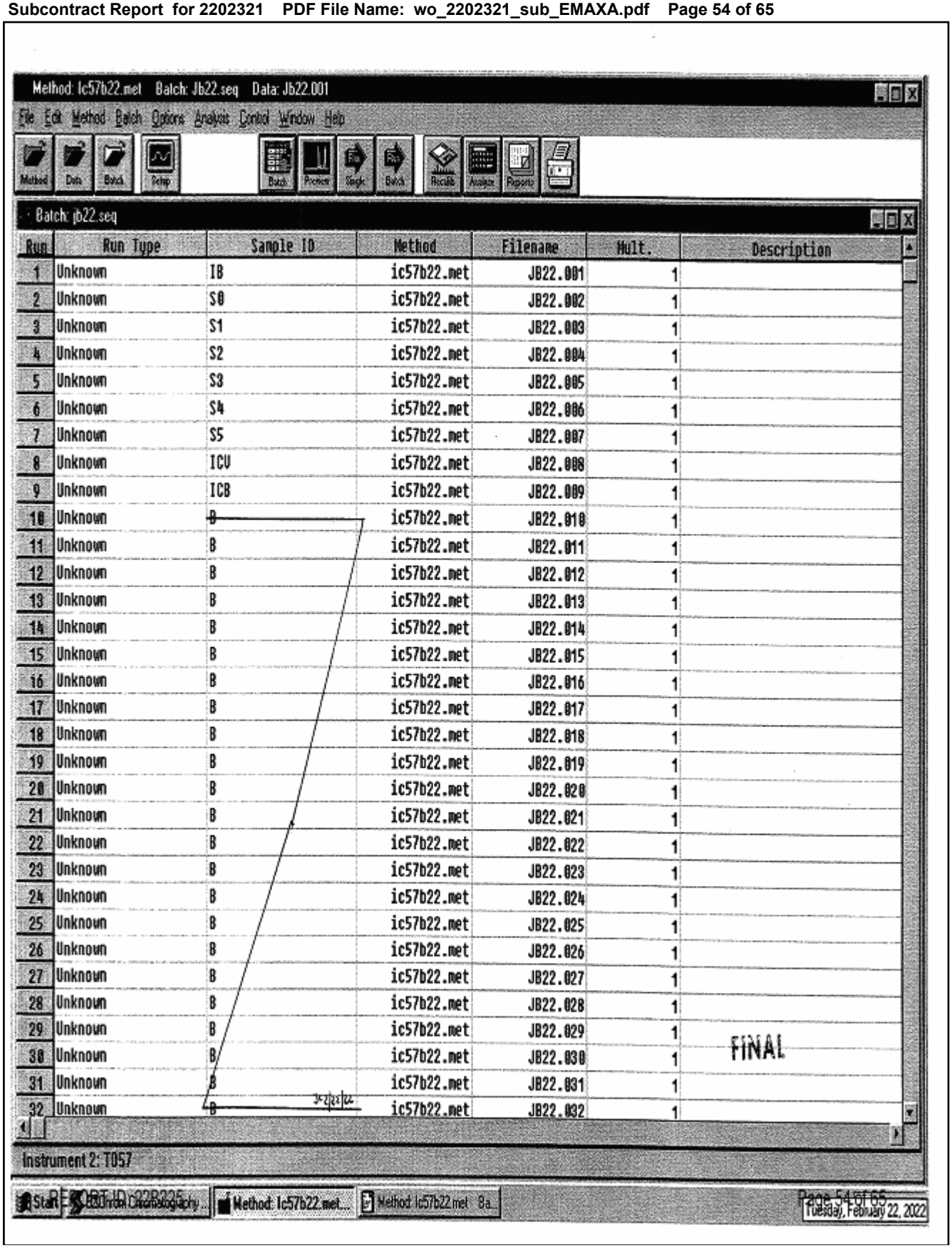
MCT Ref. MCT H 2021

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZ-CHROM	
☐	

Analyzed By: JC

Date: 2/22/22

REPORT ID: 22B225



Method: Ic57b22.met Batch: Jb22.seq Data: Jb22.001

File Edit Method Batch Options Analysis Control Window Help

Batch: jb22.seq

Run	Run Type	Sample ID	Method	Filename	Mult.	Description
1	Unknown	IB	ic57b22.met	JB22.001	1	
2	Unknown	S0	ic57b22.met	JB22.002	1	
3	Unknown	S1	ic57b22.met	JB22.003	1	
4	Unknown	S2	ic57b22.met	JB22.004	1	
5	Unknown	S3	ic57b22.met	JB22.005	1	
6	Unknown	S4	ic57b22.met	JB22.006	1	
7	Unknown	S5	ic57b22.met	JB22.007	1	
8	Unknown	ICV	ic57b22.met	JB22.008	1	
9	Unknown	ICB	ic57b22.met	JB22.009	1	
10	Unknown	B	ic57b22.met	JB22.010	1	
11	Unknown	B	ic57b22.met	JB22.011	1	
12	Unknown	B	ic57b22.met	JB22.012	1	
13	Unknown	B	ic57b22.met	JB22.013	1	
14	Unknown	B	ic57b22.met	JB22.014	1	
15	Unknown	B	ic57b22.met	JB22.015	1	
16	Unknown	B	ic57b22.met	JB22.016	1	
17	Unknown	B	ic57b22.met	JB22.017	1	
18	Unknown	B	ic57b22.met	JB22.018	1	
19	Unknown	B	ic57b22.met	JB22.019	1	
20	Unknown	B	ic57b22.met	JB22.020	1	
21	Unknown	B	ic57b22.met	JB22.021	1	
22	Unknown	B	ic57b22.met	JB22.022	1	
23	Unknown	B	ic57b22.met	JB22.023	1	
24	Unknown	B	ic57b22.met	JB22.024	1	
25	Unknown	B	ic57b22.met	JB22.025	1	
26	Unknown	B	ic57b22.met	JB22.026	1	
27	Unknown	B	ic57b22.met	JB22.027	1	
28	Unknown	B	ic57b22.met	JB22.028	1	
29	Unknown	B	ic57b22.met	JB22.029	1	
30	Unknown	B	ic57b22.met	JB22.030	1	
31	Unknown	B	ic57b22.met	JB22.031	1	
32	Unknown	B	ic57b22.met	JB22.032	1	

FINAL

Instrument 2: T057

Start Method: Ic57b22.met... Method Ic57b22.met Ba...

Tuesday, February 22, 2022

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

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Note: For samples and relavent QCs/Standards analyzed, refer to attached analytical sequence.

Eluent: NaOH (5.54 g) → 2 L Reagent Water SWR1-02-18-04

Reagent Water ID #: SWIA-011-06-08

Guard II	ID	NA
Ba		✓
Ag		✓
H		✓

Conductivity Meter Calibration

Conductivity Meter ID: D4

Standard ID	TV (µS/cm)	Reading (µS/cm)
SWIA-03-04-09	1000	1000
SWIA-03-04-01	100,032	100,000
CMC Reading (Acceptance criteria: ± 30)		
SWIA-03-04-07	1410	1412

Temperature: 25 °C Thermometer ID: 181179499

Comments:

PCB003W: B225

MS: used 0.15mL of SW4B-003-05-11 to final volume of 10mL
⇒ 15ppb

	Snapseal container
0.45 µm filter lot #: 211029103	4 oz; lot #: 2106023-1326-1W
0.2 µm filter lot #:	1.5 oz; lot #: 24821009

Book #:	A57-038
Instrument No.:	57
CMC Instrument No.:	29
Pipette ID:	SW9A-04-17
	A42762405
	SW9A-04-052
Balance ID:	10601202
Analytical Sequence:	JB25
Method File:	IC57B22
Analytical Batch:	PCB003W

SOP #	Rev. #
☐ EMAX-300M	4
☑ EMAX-314.0	5
☐ EMAX-	

STANDARDS ID		
ICAL	—	
ICV	—	
CCV-15	SW4B-003-06-03	
CCV-30		-06-04
LCS		-06-07
IPC		-06-06
MRL		-06-05
MS		-05-11

MCT Ref. MCT H 2021

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZ-CHROM	
☐	

Analyzed By: JC

Date: 2/25/22

REPORT ID: 22B225

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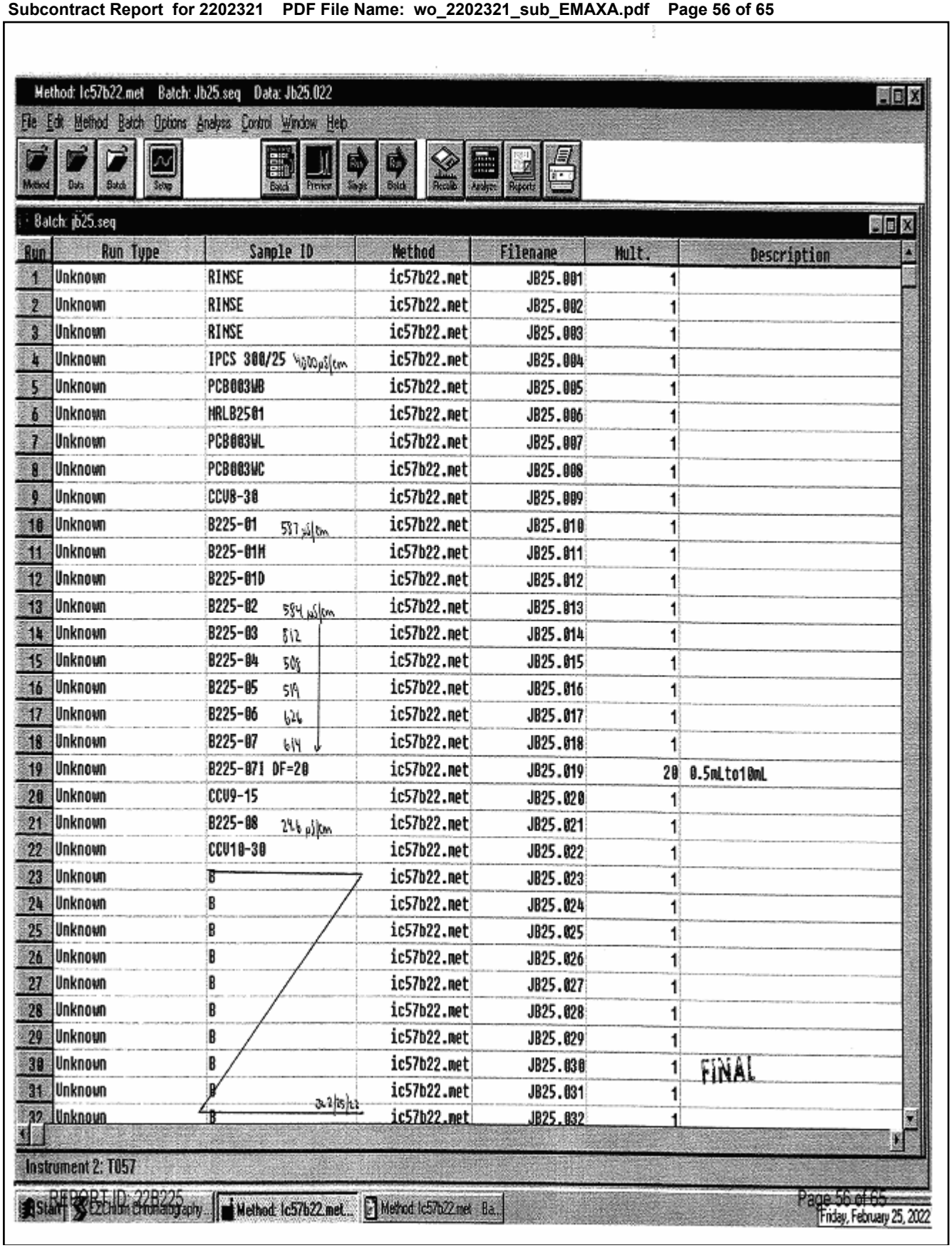

Method: lc57b22.met Batch: Jb25.seq Data: Jb25.022

File Edit Method Batch Options Analysis Control Window Help

Batch: jb25.seq

Run	Run Type	Sample ID	Method	Filename	Mult.	Description
1	Unknown	RINSE	lc57b22.met	JB25.001	1	
2	Unknown	RINSE	lc57b22.met	JB25.002	1	
3	Unknown	RINSE	lc57b22.met	JB25.003	1	
4	Unknown	IPCS 300/25 4600µS/cm	lc57b22.met	JB25.004	1	
5	Unknown	PCB003WB	lc57b22.met	JB25.005	1	
6	Unknown	MRLB2501	lc57b22.met	JB25.006	1	
7	Unknown	PCB003WL	lc57b22.met	JB25.007	1	
8	Unknown	PCB003WC	lc57b22.met	JB25.008	1	
9	Unknown	CCV8-30	lc57b22.met	JB25.009	1	
10	Unknown	B225-01 537 µS/cm	lc57b22.met	JB25.010	1	
11	Unknown	B225-01M	lc57b22.met	JB25.011	1	
12	Unknown	B225-01D	lc57b22.met	JB25.012	1	
13	Unknown	B225-02 584 µS/cm	lc57b22.met	JB25.013	1	
14	Unknown	B225-03 612	lc57b22.met	JB25.014	1	
15	Unknown	B225-04 508	lc57b22.met	JB25.015	1	
16	Unknown	B225-05 519	lc57b22.met	JB25.016	1	
17	Unknown	B225-06 624	lc57b22.met	JB25.017	1	
18	Unknown	B225-07 614	lc57b22.met	JB25.018	1	
19	Unknown	B225-07I DF=20	lc57b22.met	JB25.019	20	0.5mLto10mL
20	Unknown	CCV9-15	lc57b22.met	JB25.020	1	
21	Unknown	B225-08 246 µS/cm	lc57b22.met	JB25.021	1	
22	Unknown	CCV10-30	lc57b22.met	JB25.022	1	
23	Unknown	B	lc57b22.met	JB25.023	1	
24	Unknown	B	lc57b22.met	JB25.024	1	
25	Unknown	B	lc57b22.met	JB25.025	1	
26	Unknown	B	lc57b22.met	JB25.026	1	
27	Unknown	B	lc57b22.met	JB25.027	1	
28	Unknown	B	lc57b22.met	JB25.028	1	
29	Unknown	B	lc57b22.met	JB25.029	1	
30	Unknown	B	lc57b22.met	JB25.030	1	FINAL
31	Unknown	B	lc57b22.met	JB25.031	1	
32	Unknown	B 2/25/22	lc57b22.met	JB25.032	1	

Instrument 2: T057

REPORT ID: 22B225 Page 56 of 65

Start EZChrom Chromatography... Method: lc57b22.met... Method lc57b22.met Ba... Friday, February 25, 2022

RETENTION TIME WINDOW

REPORT ID: 22B225

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RETENTION TIME WINDOW

METHOD 314.0

Lab Name:	EMAX	**METHOD:**	EMAX-314.0
Instrument ID:	DX500IC57	**IC COLUMN:**	AS16/AG16
		COLUMN SIZE:	4x250mm

Compound	Ical Mean RT	from	to	Retention Time Window
PERCHLORATE	**13.17**	12.92	13.42	**0.246**

IC57B22.MET

4/24/22

REPORT ID: 22B225

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STANDARD LOG(S)

EMAX LABORATORIES, INC.

STANDARDS LOG FOR PERCHLORATE

Book #: SW4B-003

Standard ID	Name	Source	Conc. (mg/L)	Aliquot (ml)	Reagent Water ID	Final Vol (ml)	Final Conc. (mg/L)	Preparation Date	Expiration Date	Prepared By	Comments	Micropipette ID
SW4B-003-06-01	ClO_4	SW4B-003-05-03	1 ppm	0.2 mL	SWIR-011-06-08	100 mL	2 ppb	2/22/22	3/24/22	JC	ICAL	C
SW4B-003-06-	↓	↓	↓	0.4	↓	↓	4	↓	↓	↓	↓	C
SW4B-003-06-	↓	↓	↓	1.0	↓	↓	10	↓	↓	↓	↓	B
SW4B-003-06-	↓	↓	↓	2.5	↓	↓	25	↓	↓	↓	↓	A
SW4B-003-06-	↓	↓	↓	3.0	↓	↓	30	↓	↓	↓	↓	A
SW4B-003-06-02	ClO_4	SW4B-003-05-11	1 ppm	1.5 mL	SWIR-011-06-08	100 mL	15 ppb	2/22/22	3/24/22	JC	ICV	B
SW4B-003-06-03	ClO_4	SW4B-003-05-03	1 ppm	1.5mL	SWIR-011-06-08	100mL	15 ppb	2/22/22	3/24/22	JC	CCV-15	B
SW4B-003-06-04	ClO_4	SW4B-003-05-03	↓	3.0	↓	↓	30	↓	↓	↓	CCV-30	A
SW4B-003-06-05	↓	↓	↓	0.2	↓	↓	2	↓	↓	↓	MRL	C
SW4B-003-06-06	ClO_4	SW4B-003-05-11 / SW4B-003-05-03	1 ppm / 250 ppm	2.5mL / 1.2mL	SWIR-011-06-08	100mL	25ppb / 300 ppm	2/22/22	3/24/22	JC	IPCS 300/25	A;B
SW4B-003-06-07	ClO_4	SW4B-003-05-11	1 ppm	2.5mL	SWIR-011-06-08	100mL	25 ppb	2/22/22	3/24/22	JC	LCS	A
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												

Micropipette ID Legend: A. SW9A-04-17 B. A42762405 C. SW9A-04-052

REPORT ID: 22B225

EMAX LABORATORIES, INC.

STANDARDS LOG FOR PERCHLORATE

Book #: SW4B-003

Standard ID	Name	Source	Conc. (mg/L)	Aliquot (ml)	Reagent Water ID	Final Vol (ml)	Final Conc. (mg/L)	Preparation Date	Expiration Date	Prepared By	Comments	Micropipette ID
SW4B-003-06-01	ClO_4	SW4B-003-05-03	1 ppm	0.2 mL	SWIR-011-04-08	100 mL	2 ppb	2/22/22	3/24/22	JC	ICAL	C
SW4B-003-06-	↓	↓	↓	0.4	↓	↓	4	↓	↓	↓	↓	C
SW4B-003-06-	↓	↓	↓	1.0	↓	↓	10	↓	↓	↓	↓	B
SW4B-003-06-	↓	↓	↓	2.5	↓	↓	25	↓	↓	↓	↓	A
SW4B-003-06-	↓	↓	↓	3.0	↓	↓	30	↓	↓	↓	↓	A
SW4B-003-06-02	ClO_4	SW4B-003-05-11	1 ppm	1.5 mL	SWIR-011-04-08	100 mL	15 ppb	2/22/22	3/24/22	JC	ICV	B
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												
SW4B-003-06-												

Micropipette ID Legend: A. SW9A-04-17 B. A42762405 C. SW9A-04-052

REPORT ID: 22B225

EMAX LABORATORIES, INC.

STANDARDS LOG FOR PERCHLORATE

Book #: SW4B-003

Standard ID	Name	Source	Conc. (mg/L)	Aliquot (ml)	Reagent Water ID	Final Vol (ml)	Final Conc. (ug/L)	Preparation Date	Expiration Date	Prepared By	Comments	Micropipette ID
SW4B-003-05-01	ClO_4	SW4B-003-01-0	1ppm	1.5mL	SW1A-011-05-06	100mL	15ppb	12/15/21	1/15/21	YC	CCV15	B
SW4B-003-05-02	↓	↓	↓	3.0mL	↓	↓	30ppb	↓	↓	↓	CCV30	A
SW4B-003-05-03	ClO_4	SW4A-02-01-01	1000ppm	0.1mL	SW1A-011-05-06	100mL	1ppm	1/4/22	7/4/22	JC	Primary Wk. Std.	C
SW4B-003-05-04	ClO_4	SW4B-003-05-03	1ppm	1.5mL	SW1A-011-05-06	100mL	15ppb	1/4/22	2/3/22	JC	CCV-15	B
SW4B-003-05-05	↓	↓	↓	3.0mL	↓	↓	30ppb	↓	↓	↓	CCV-30	A
SW4B-003-05-06	↓	↓	↓	0.2mL	↓	↓	2ppb	↓	↓	↓	MRL	C
SW4B-003-05-07	ClO_4	~~SW4B-003-05-03~~ SW4A-01-01-08	~~1ppm~~ 1.5ppm	~~2.5mL~~ 1.2mL	SW1A-011-05-06	100mL	~~25ppb~~ 30ppb	1/4/22	2/3/22	JC	IPCS 300/25	A; B
SW4B-003-05-08	ClO_4	SW4B-003-05-03	1ppm	2.5mL	SW1A-011-05-06	100mL	25ppb	1/4/22	2/3/22	JC	LCS x7	A
SW4B-003-05-09	ClO_4	SW4B-003-05-03	1ppm	0.2mL	SW1A-011-05-06	100mL	2ppb	1/4/22	2/3/22	JC	LOQ	C
SW4B-003-05-10	↓	↓	↓	0.1mL	↓	↓	1ppb	↓	↓	↓	LOD	C
~~SW4B-003-05-11~~	~~ClO_4~~	~~SW4B~~									JC 1/26/22	
SW4B-003-05-11	ClO_4	SW4A-02-01-05	1000ppm	0.099mL	SW1A-011-05-06	100mL	1ppm	1/26/22	7/26/22	JC	Secondary Wk. Std.	C
SW4B-003-05-12	ClO_4	~~SW4B-003-05-11~~ SW4A-01-01-09	~~1ppm~~ 1.5ppm	~~2.5mL~~ 1.2mL	SW1A-011-05-06	100mL	~~25ppb~~ 30ppb	1/26/22	2/25/22	JC	IPCS 300/25	A; B
SW4B-003-05-13	ClO_4	SW4B-003-05-11	1ppm	2.5mL	SW1A-011-05-06	100mL	25ppb	1/26/22	2/25/22	JC	LCS	A
SW4B-003-05-14	ClO_4	SW4B-003-05-03	1ppm	1.5mL	SW1A-011-05-06	100mL	15ppb	1/27/22	2/26/22	JC	CCV-15	B
SW4B-003-05-15	↓	↓	↓	3.0mL	↓	↓	30ppb	↓	↓	↓	CCV-30	A
SW4B-003-05-16	↓	↓	↓	0.2mL	↓	↓	2ppb	↓	↓	↓	MRL	C
SW4B-003-05-												
SW4B-003-05-												
SW4B-003-05-												
SW4B-003-05-											JC 1/26/22	

Micropipette ID Legend: A. SW9A-04-17 B. A42762405 C. SW9A-04-052

REPORT ID: 22B225

EMAX LABORATORIES, INC.

STANDARDS LOG FOR PERCHLORATE

Book No: SW4A-02

Standard ID	Name	Source	Lot #	Location	Rcvd. on	Rcvd. By	Exp. Date	Comments
SW4A-02-01-01	Perchlorate	AccuStandard	2d1025019	IC	11/22/21	JC	5/5/2027	100mL; 1000 ug/mL
SW4A-02-01-02	Dionex OnGuard IIBa	Dionex	210924-1-Ba	Ic	12/13/21	Jc	9/1/2022	1 Box 057093
SW4A-02-01-03	Dionex On Guard Ag	Dionex	211229-1-Ag	IC	1/11/22	Jc	12/1/2022	1 box 057089
SW4A-02-01-04	Mixed Common Anion Standard	Accu Standard	21903519-02	IC	1/18/22	Jc	11/7/2023	100mL; M-314.0-MCA-250X-1
SW4A-02-01-05	Perchlorate	Sep Science	S210812007	IC	1/20/22	Jc	~~5/1/2023~~ 1/24/23 ~~CB~~ 1/24/23	500mL; 1008 µg/mL 25a-220-581
SW4A-02-01-06	Dionex On Guard II H	Dionex	220111-1-H	IC	1/24/22	Jc	1/1/2023	1 Box 057085
SW4A-02-01-07								
SW4A-02-01-08								
SW4A-02-01-09								
SW4A-02-01-10								

REPORT ID: 22B225

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

SWMA-02-01-01
rcvd. 11/22/21
exp: 5/15/23
yc 11/22/21

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO_4)
SRM: Ind. Std.
Lot: 221025019
Matrix: Water
Hazards: *Refer to SDS for complete safety information*

Date Certified: Feb 5, 2021
Expiration: Mar 5, 2023
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

GHS
Signal Word: None

ANAB AR-1463 ANAB AT-1339 ilac-MRA

Component		SRM #	Certified Concentration (µg/mL)
ClO_4	Perchlorate	Ind. Std.	1000

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±2.4%.
The final solution was checked against an independent standard to verify its concentration.
We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as ASTM Type I 18 megohm deionized water.
All glassware used in preparation is Class A.
All weights are traceable through NIST, Test No. 684/289871-17
All bottles are triple rinsed with deionized water prior to use.
Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware. Keep bottle tightly capped.

Certified By: Morgan O'Leary
Morgan O'Leary, Inorganic QC Manager

Page 1 of 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-CRG/IND-001 Rev. 7/20

REPORT ID: 226225 Page 64 of 65

SCP SCIENCE

Providing Innovative Solutions to Analytical Chemists

Certificate of Analysis

SW4A-02-01-05
Rcvd: 1/20/22 JC
Exp: ~~5/1/2023~~
1/24/23
LC 1/24/22

ClO_4^-

1.0 DESCRIPTION: ***Accu*SPEC – IC Standard – Perchlorate 1000 µg/ml**

Catalogue Number:	**250-220-58x**
Starting Material:	Potassium perchlorate ACS
Lot Number:	**S210812007**
Expiration Date:	**May 2023** (or 12 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Certified Value:	**1008 ± 10 µg/ml**
Method of analysis:	Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES). Result calculated based on the value of the counter-ion.
Traceability:	NIST Standard Reference Material 3141a

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:

Density:	**0.999 g/ml @ 23.1°C**

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval:	Yaling Sui, Chemist
Certification Date:	August 26, 2021

Yaling Sui

REPORT ID: 22B225

Pg 1 of / de 2

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Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell	**Reported:** 03/24/2022 11:46
3761 Attucks Drive	Project: JPL- GW Monitoring Wells-CLP
Powell, OH 43065	Project Number: 1Q22
	Project Manager: David Conner

Notes And Definitions

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

Date of Report: 03/24/2022

David Conner

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Client Project:	1Q22
BCL Project:	JPL- GW Monitoring Wells-CLP
BCL Work Order:	2202427
Invoice ID:	

Enclosed are the results of analyses for samples received by the laboratory on 2/3/2022. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1001286926

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Operations Manager

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

Table of Contents

Table of Contents

BC Laboratories, Inc. — Chain of Custody Form

22-02427

*Required Fields

Page 1 of 1

Report To: Client:* Tidewater, Inc.	Project Description:* JPL-GW Monitoring
Attn:* David Conner	
Street Address:* 3761 Attucks Drive	Project Code:* 4Q21
City:* Powell State:* OH Zip:* 43065	
Phone#:* (626) 298 - 5715 Fax#: (614) 792 - 2897	Sampler (s):* Blaine Tech
Email Address: david.conner@tideh2o.net	C. Henderson
Submission #:	

Billing

Client:* Tidewater
Attn:* David Conner
Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065

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

*Standard Turnaround = 10

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 -218.6 (mg/L)	Cl, NO3, NO2, SO4		Orthophosphate 365.1				Notes
-1	TIB-4-020322	~~2-3-22~~	0900	W	X										
-2	MW-17-4-020322	~~2-3-22~~	0915		X	X	X	X							
-3	MW-17-3-020322		0955		X	X	X	X							
-4	MW-17-2-020322		1030		X	X	X	X							
-5	DUP-4-10322		1040		X	X	X	X							
-6	EB-4-020322		1335		X	X	X	X							
-7	MW-18-5-020322		1200		X		X								
-8	MW-18-4-020322		1240		X	X	X	X							
-9	MW-18-3-020322		1315		X	X	X	X							MS/MSD + level IV
-10	MW-18-2-020322		1345		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 S File (CA Default)
☐ Geotracker 2 File
☐ Other (Specify) _____

Cost Center: _____ Global ID: _____

	Date	Time		Date	Time
1. Relinquished By:	2/3/22	1400	1. Received By:	2/3/22	2:13
2. Relinquished By:	2/3/22	6:30	2. Received By:	2/3/22	1830
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

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 22-02427

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

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

FREE LIQUID
YES ☒ NO ☐
(W) / S

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

Custody Seals Ice Chest ☐ 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: 0.98 Container: PE Thermometer ID: 274 Date/Time 2/3/22

Temperature: (A) 0.9 °C / (C) 0.5 °C Analyst Init ZCI 1830

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / (16oz) PE UNPRES		E	E	E	E	E	D	E	I,J	E
2oz Cr+6		D	D	D	D	D	D	P	G,H	D
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		F	F	F	F	F	F	F	K,L	F
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL ~~ABC~~ Amber w/HCl	A	A-C	A-C	A-C	A-C	A-C	A-C	A-C	A-F	A-C
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

SHORT HOLDING TIME: SS, DOT, OP, MEAS, BOD, Cl2, DO, Cr+6, NO3, NO2

RETURN TO CLIENT ☐ DISPOSAL BY LAB ☐ SUBOUT ☐

Comments:
Sample Numbering Completed By: _____ Date/Time: 2/4/22 0901
A = Actual / C = Corrected

Rev 22 04/13/21
[S:\WP\Doc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 22]

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202427-01	**COC Number:**	---	**Receive Date:**	02/03/2022 18:30
	Project Number:	JPL	**Sampling Date:**	02/03/2022 08:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-4-020322	**Lab Matrix:**	Water
	Sampled By:	BTSC	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-4-020322	
			Matrix: WG	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202427-02	**COC Number:**	---	**Receive Date:**	02/03/2022 18:30
	Project Number:	JPL	**Sampling Date:**	02/03/2022 09:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-4-020322	**Lab Matrix:**	Water
	Sampled By:	BTSC	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-4-020322	
			Matrix: WG	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202427-03	**COC Number:**	---	**Receive Date:**	02/03/2022 18:30
	Project Number:	JPL	**Sampling Date:**	02/03/2022 09:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-3-020322	**Lab Matrix:**	Water
	Sampled By:	BTSC	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-3-020322	
			Matrix: WG	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202427-04	**COC Number:**	---	**Receive Date:**	02/03/2022 18:30
	Project Number:	JPL	**Sampling Date:**	02/03/2022 10:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-2-020322	**Lab Matrix:**	Water
	Sampled By:	BTSC	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-2-020322	
			Matrix: WG	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202427-05	**COC Number:**	---	**Receive Date:**	02/03/2022 18:30
	Project Number:	JPL	**Sampling Date:**	02/03/2022 10:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-4-1Q22	**Lab Matrix:**	Water
	Sampled By:	BTSC	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-4-1Q22	
			Matrix: WG	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202427-06	**COC Number:**	---	**Receive Date:**	02/03/2022 18:30
	Project Number:	JPL	**Sampling Date:**	02/03/2022 13:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-4-020322	**Lab Matrix:**	Water
	Sampled By:	BTSC	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-4-020322	
			Matrix: WG	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202427-07	**COC Number:**	---	**Receive Date:**	02/03/2022 18:30
	Project Number:	JPL	**Sampling Date:**	02/03/2022 12:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-18-5-020322	**Lab Matrix:**	Water
	Sampled By:	BTSC	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-18-5-020322	
			Matrix: WG	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202427-08	**COC Number:**	---	**Receive Date:**	02/03/2022 18:30
	Project Number:	JPL	**Sampling Date:**	02/03/2022 12:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-18-4-020322	**Lab Matrix:**	Water
	Sampled By:	BTSC	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-18-4-020322	
			Matrix: WG	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202427-09	**COC Number:**	---	**Receive Date:**	02/03/2022 18:30
	Project Number:	JPL	**Sampling Date:**	02/03/2022 13:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-18-3-020322	**Lab Matrix:**	Water
	Sampled By:	BTSC	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-18-3-020322	
			Matrix: WG	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

2202427-10

COC Number: ---
Project Number: JPL
Sampling Location: ---
Sampling Point: MW-18-2-020322
Sampled By: BTSC

Receive Date: 02/03/2022 18:30
Sampling Date: 02/03/2022 13:45
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Delivery Work Order:
Global ID: 0000000000
Location ID (FieldPoint):
MW-18-2-020322
Matrix: WG
Sample QC Type (SACode): CS
Cooler ID:

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-01 | **Client Sample Name:** JPL, TB-4-020322, 2/3/2022 8:00:00AM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-01 | **Client Sample Name:** JPL, TB-4-020322, 2/3/2022 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	**0.89**	**ug/L**	**0.50**	**0.21**	**EPA-524.2**	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-01 | **Client Sample Name:** JPL, TB-4-020322, 2/3/2022 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 20:31	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202427-01 | **Client Sample Name:** JPL, TB-4-020322, 2/3/2022 8:00:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 20:31	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-02 | **Client Sample Name:** JPL, MW-17-4-020322, 2/3/2022 9:15:00AM

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

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-02 | **Client Sample Name:** JPL, MW-17-4-020322, 2/3/2022 9:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.62**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.65**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-02 | **Client Sample Name:** JPL, MW-17-4-020322, 2/3/2022 9:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 20:56	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202427-02 | **Client Sample Name:** JPL, MW-17-4-020322, 2/3/2022 9:15:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 20:56	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202427-02 | **Client Sample Name:** JPL, MW-17-4-020322, 2/3/2022 9:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0015**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	**2.4**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/07/22 14:00	02/08/22 08:43	SAV	IC-4	1	B131284	No Prep
2	EPA-200.8	02/07/22 20:35	02/08/22 13:34	AK1	PE-EL4	1	B131161	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-03 | **Client Sample Name:** JPL, MW-17-3-020322, 2/3/2022 9:55:00AM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-03 | **Client Sample Name:** JPL, MW-17-3-020322, 2/3/2022 9:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	**0.39**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.33**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND	**J**	1
Toluene	**0.24**	**ug/L**	**0.50**	**0.17**	**EPA-524.2**	ND	**J**	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**2.2**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-03 | **Client Sample Name:** JPL, MW-17-3-020322, 2/3/2022 9:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 21:20	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202427-03 | **Client Sample Name:** JPL, MW-17-3-020322, 2/3/2022 9:55:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 21:20	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202427-03 | **Client Sample Name:** JPL, MW-17-3-020322, 2/3/2022 9:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000049**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	**1.6**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/07/22 14:00	02/08/22 08:53	SAV	IC-4	1	B131284	No Prep
2	EPA-200.8	02/07/22 20:35	02/08/22 13:36	AK1	PE-EL4	1	B131161	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-04 | **Client Sample Name:** JPL, MW-17-2-020322, 2/3/2022 10:30:00AM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-04 | **Client Sample Name:** JPL, MW-17-2-020322, 2/3/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-04 | **Client Sample Name:** JPL, MW-17-2-020322, 2/3/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 21:45	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202427-04 | **Client Sample Name:** JPL, MW-17-2-020322, 2/3/2022 10:30:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 21:45	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202427-04 | **Client Sample Name:** JPL, MW-17-2-020322, 2/3/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000065**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/07/22 14:00	02/08/22 09:02	SAV	IC-4	1	B131284	No Prep
2	EPA-200.8	02/07/22 20:35	02/08/22 13:37	AK1	PE-EL4	1	B131161	EPA 200.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-05 | **Client Sample Name:** JPL, DUP-4-1Q22, 2/3/2022 10:40:00AM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-05 | **Client Sample Name:** JPL, DUP-4-1Q22, 2/3/2022 10:40:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-05 | **Client Sample Name:** JPL, DUP-4-1Q22, 2/3/2022 10:40:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 22:09	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202427-05 | **Client Sample Name:** JPL, DUP-4-1Q22, 2/3/2022 10:40:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 22:09	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202427-05 | **Client Sample Name:** JPL, DUP-4-1Q22, 2/3/2022 10:40:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000089**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/07/22 14:00	02/08/22 09:31	SAV	IC-4	1	B131284	No Prep
2	EPA-200.8	02/07/22 20:35	02/08/22 13:39	AK1	PE-EL4	1	B131161	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-06 | **Client Sample Name:** JPL, EB-4-020322, 2/3/2022 1:35:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-06 | **Client Sample Name:** JPL, EB-4-020322, 2/3/2022 1:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-06 | **Client Sample Name:** JPL, EB-4-020322, 2/3/2022 1:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 22:34	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202427-06 | **Client Sample Name:** JPL, EB-4-020322, 2/3/2022 1:35:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 22:34	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202427-06 | **Client Sample Name:** JPL, EB-4-020322, 2/3/2022 1:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000065**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/07/22 14:00	02/08/22 09:41	SAV	IC-4	1	B131284	No Prep
2	EPA-200.8	02/07/22 20:35	02/08/22 14:23	KHS	PE-EL4	1	B131161	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-07 | **Client Sample Name:** JPL, MW-18-5-020322, 2/3/2022 12:00:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-07 | **Client Sample Name:** JPL, MW-18-5-020322, 2/3/2022 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	**0.16**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-07 | **Client Sample Name:** JPL, MW-18-5-020322, 2/3/2022 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 22:58	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202427-07 | **Client Sample Name:** JPL, MW-18-5-020322, 2/3/2022 12:00:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 22:58	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-08 | **Client Sample Name:** JPL, MW-18-4-020322, 2/3/2022 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	**4.3**	**ug/L**	**0.50**	**0.17**	**EPA-524.2**	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**1.2**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-08 | **Client Sample Name:** JPL, MW-18-4-020322, 2/3/2022 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.2**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**1.6**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-08 | **Client Sample Name:** JPL, MW-18-4-020322, 2/3/2022 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 23:23	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202427-08 | **Client Sample Name:** JPL, MW-18-4-020322, 2/3/2022 12:40:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 23:23	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202427-08 | **Client Sample Name:** JPL, MW-18-4-020322, 2/3/2022 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0016**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	**7.6**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/07/22 14:00	02/08/22 09:50	SAV	IC-4	1	B131284	No Prep
2	EPA-200.8	02/07/22 20:35	02/08/22 14:25	KHS	PE-EL4	1	B131161	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-09 | **Client Sample Name:** JPL, MW-18-3-020322, 2/3/2022 1:15:00PM

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

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-09 | **Client Sample Name:** JPL, MW-18-3-020322, 2/3/2022 1:15:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-09 | **Client Sample Name:** JPL, MW-18-3-020322, 2/3/2022 1:15:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 16:01	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202427-09 | **Client Sample Name:** JPL, MW-18-3-020322, 2/3/2022 1:15:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 16:01	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202427-09 | **Client Sample Name:** JPL, MW-18-3-020322, 2/3/2022 1:15:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0018**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	**2.0**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/07/22 14:00	02/08/22 10:00	SAV	IC-4	1	B131284	No Prep
2	EPA-200.8	02/07/22 20:35	02/08/22 13:08	AK1	PE-EL4	1	B131161	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-10 | **Client Sample Name:** JPL, MW-18-2-020322, 2/3/2022 1:45:00PM

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

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-10 | **Client Sample Name:** JPL, MW-18-2-020322, 2/3/2022 1:45:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202427-10 | **Client Sample Name:** JPL, MW-18-2-020322, 2/3/2022 1:45:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 23:47	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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3761 Attucks Drive
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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202427-10 | **Client Sample Name:** JPL, MW-18-2-020322, 2/3/2022 1:45:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/04/22 07:00	02/04/22 23:47	MGC	MS-V5	1	B131008	EPA 524.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202427-10 | **Client Sample Name:** JPL, MW-18-2-020322, 2/3/2022 1:45:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00019**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/07/22 14:00	02/08/22 10:38	SAV	IC-4	1	B131284	No Prep
2	EPA-200.8	02/07/22 20:35	02/08/22 14:27	KHS	PE-EL4	1	B131161	EPA 200.2

DCN = Data Continuation Number

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Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131008						
Benzene	B131008-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B131008-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B131008-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B131008-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B131008-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B131008-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B131008-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B131008-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B131008-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B131008-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B131008-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B131008-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B131008-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B131008-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B131008-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B131008-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B131008-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B131008-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B131008-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B131008-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B131008-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B131008-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B131008-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B131008-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B131008-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B131008-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B131008-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B131008-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B131008-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B131008-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B131008-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B131008-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B131008-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B131008-BLK1	ND	ug/L	0.50	0.14	

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Project Number: 1Q22
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: B131008						
trans-1,3-Dichloropropene	B131008-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B131008-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B131008-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B131008-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B131008-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B131008-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B131008-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B131008-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B131008-BLK1	ND	ug/L	0.50	0.12	
Styrene	B131008-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B131008-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B131008-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B131008-BLK1	ND	ug/L	0.50	0.23	
Toluene	B131008-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B131008-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B131008-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B131008-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B131008-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B131008-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B131008-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B131008-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B131008-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B131008-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B131008-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B131008-BLK1	ND	ug/L	0.50	0.18	
Acetone	B131008-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B131008-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B131008-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B131008-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B131008-BLK1	ND	ug/L	2.0	2.0	
Carbon disulfide	B131008-BLK1	ND	ug/L	0.50	0.48	
trans-1,4-Dichloro-2-butene	B131008-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B131008-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B131008-BLK1	ND	ug/L	4.0	1.3	

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Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B131008						
Ethyl t-butyl ether	B131008-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B131008-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B131008-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B131008-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B131008-BLK1	ND	ug/L	5.0	3.3	
Methyl iodide	B131008-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B131008-BLK1	ND	ug/L	5.0	2.4	
Methyl methacrylate	B131008-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B131008-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B131008-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B131008-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B131008-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B131008-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	**B131008-BLK1**	**102**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B131008-BLK1**	**97.8**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B131008-BLK1**	**98.4**	%	**80 - 120 (LCL - UCL)**		

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Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B131008										
Benzene	B131008-BS1	LCS	24.790	25.000	ug/L	99.2		70 - 130		
Bromodichloromethane	B131008-BS1	LCS	25.500	25.000	ug/L	102		70 - 130		
Chlorobenzene	B131008-BS1	LCS	23.570	25.000	ug/L	94.3		70 - 130		
Chloroethane	B131008-BS1	LCS	24.540	25.000	ug/L	98.2		70 - 130		
1,4-Dichlorobenzene	B131008-BS1	LCS	23.550	25.000	ug/L	94.2		70 - 130		
1,1-Dichloroethane	B131008-BS1	LCS	24.900	25.000	ug/L	99.6		70 - 130		
1,1-Dichloroethene	B131008-BS1	LCS	26.360	25.000	ug/L	105		70 - 130		
Toluene	B131008-BS1	LCS	24.580	25.000	ug/L	98.3		70 - 130		
Trichloroethene	B131008-BS1	LCS	25.060	25.000	ug/L	100		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B131008-BS1	LCS	10.210	10.000	ug/L	102		75 - 125		
Toluene-d8 (Surrogate)	B131008-BS1	LCS	10.090	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	B131008-BS1	LCS	10.240	10.000	ug/L	102		80 - 120		

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Project Number: 1Q22
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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: B131008	Used client sample: Y - Description: MW-18-3-020322, 02/03/2022 13:15										
Benzene	MS	2202427-09	ND	24.450	25.000	ug/L		97.8		70 - 130	
	MSD	2202427-09	ND	23.710	25.000	ug/L	3.1	94.8	20	70 - 130	
Bromodichloromethane	MS	2202427-09	ND	25.110	25.000	ug/L		100		70 - 130	
	MSD	2202427-09	ND	24.060	25.000	ug/L	4.3	96.2	20	70 - 130	
Chlorobenzene	MS	2202427-09	ND	22.890	25.000	ug/L		91.6		70 - 130	
	MSD	2202427-09	ND	22.680	25.000	ug/L	0.9	90.7	20	70 - 130	
Chloroethane	MS	2202427-09	ND	24.360	25.000	ug/L		97.4		70 - 130	
	MSD	2202427-09	ND	23.330	25.000	ug/L	4.3	93.3	20	70 - 130	
1,4-Dichlorobenzene	MS	2202427-09	ND	22.870	25.000	ug/L		91.5		70 - 130	
	MSD	2202427-09	ND	22.980	25.000	ug/L	0.5	91.9	20	70 - 130	
1,1-Dichloroethane	MS	2202427-09	ND	24.480	25.000	ug/L		97.9		70 - 130	
	MSD	2202427-09	ND	23.870	25.000	ug/L	2.5	95.5	20	70 - 130	
1,1-Dichloroethene	MS	2202427-09	ND	26.160	25.000	ug/L		105		70 - 130	
	MSD	2202427-09	ND	25.160	25.000	ug/L	3.9	101	20	70 - 130	
Toluene	MS	2202427-09	ND	24.490	25.000	ug/L		98.0		70 - 130	
	MSD	2202427-09	ND	23.460	25.000	ug/L	4.3	93.8	20	70 - 130	
Trichloroethene	MS	2202427-09	ND	24.300	25.000	ug/L		97.2		70 - 130	
	MSD	2202427-09	ND	23.180	25.000	ug/L	4.7	92.7	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2202427-09	ND	10.250	10.000	ug/L		102		75 - 125	
	MSD	2202427-09	ND	10.150	10.000	ug/L	1.0	102		75 - 125	
Toluene-d8 (Surrogate)	MS	2202427-09	ND	10.060	10.000	ug/L		101		80 - 120	
	MSD	2202427-09	ND	10.000	10.000	ug/L	0.6	100		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	2202427-09	ND	10.290	10.000	ug/L		103		80 - 120	
	MSD	2202427-09	ND	10.160	10.000	ug/L	1.3	102		80 - 120	

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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: B131008						
Chloroacetonitrile	B131008-BLK1	0	ug/L			
1-Chlorobutane	B131008-BLK1	0	ug/L			
1,1-Dichloropropanone	B131008-BLK1	0	ug/L			
Methyl acrylate	B131008-BLK1	0	ug/L			
Nitrobenzene	B131008-BLK1	0	ug/L			
2-Nitropropane	B131008-BLK1	0	ug/L			

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Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B131161						
Total Recoverable Chromium	B131161-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B131284						
Hexavalent Chromium	B131284-BLK1	ND	mg/L	0.00020	0.000020	

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Project Manager: David Conner

Metals Analysis

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B131161										
Total Recoverable Chromium	B131161-BS1	LCS	40.222	40.000	ug/L	101		85 - 115		
QC Batch ID: B131284										
Hexavalent Chromium	B131284-BS1	LCS	0.019939	0.020000	mg/L	99.7		90 - 110		

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Reported: 03/24/2022 11:47
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131161	Used client sample: Y - Description: MW-18-3-020322, 02/03/2022 13:15										
Total Recoverable Chromium	DUP	2202427-09	1.9620	1.8400		ug/L	6.4		20		J
	MS	2202427-09	1.9620	42.400	40.000	ug/L		101		70 - 130	
	MSD	2202427-09	1.9620	40.896	40.000	ug/L	3.6	97.3	20	70 - 130	
QC Batch ID: B131284	Used client sample: Y - Description: MW-18-3-020322, 02/03/2022 13:15										
Hexavalent Chromium	DUP	2202427-09	0.0018130	0.0018330		mg/L	1.1		10		
	MS	2202427-09	0.0018130	0.021822	0.020202	mg/L		99.0		90 - 110	
	MSD	2202427-09	0.0018130	0.021833	0.020202	mg/L	0.1	99.1	10	90 - 110	

Torrent LABORATORY, INC.

ANALYTICAL SUMMARY DATA PACKAGE

Level II

SDG # DoD2203001

Project Name: JPL/2202427

Project Location:

SUBMITTAL TO:

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SUBMITTAL BY:

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Fax (408)263-8293

LABORATORY CONTACT PERSON:

Project Manager: KEVANS
Tel (408) 263-5258
Fax (408) 263-2708
Email: pm@torrentlaboratory.com
Original Report Date: 3/15/2022
Report Revision:
Revision Date:

Total Pages: 15

THIS DOCUMENT MEETS DoD QSM 5.3 STANDARDS

The results relate to only the samples associated with the referenced SDG. The submitted data has been produced in accordance with laboratory procedures. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Torrent Laboratory, Inc

Kathie Evans
Project Manager

March 15, 2022
Date

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Torrent LABORATORY, INC.

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Torrent LABORATORY, INC.

CASE NARRATIVE

No issues were encountered with receiving, preparation, analysis or reporting of the results associated with this work order.

Reported method per client SOW PG&E 2019 Cntl Coast

Analytical Comments for method 314.0
Note: QC Preparation Batch ID 1139936, DoD2203001-001 MS/MSD Note:The % recoveries for Perchlorate are outside of laboratory control limits but RPD is within limits. The associated LCS/LCSD is within both % Recovery and RPD limits. No corrective action required.

LAB QUALIFIERS

U - Analyte was not detected and is reported as less than the MDL or as defined by the customer. The MDL has been adjusted for any dilution or concentration of the sample.

J - The reported result is an estimated value (the sample concentration is between the established MDL and the client specified PQL).

B - Blank contamination. The recorded result is associated with a blank with a detected value at greater than 1/2 the PQL.

D - Sample/surrogate spike concentration not reportable due to required dilution of the sample.

E - The reported result is an estimated result. The reported result was outside of the calibration range of the instrument but within linear range.

NR - Not Recoverable. The sample concentration is greater than four times the spike concentration.

Q or S - One or more quality control criteria failed (e.g., LCS recovery, surrogate spike)

Torrent LABORATORY, INC.

Sample Receipt Checklist

Client Name: Pace Analytical Services,Inc
Project Name: Rialto
Work Order No.: DoD2203001

Date and Time Received: 3/1/2022
Received By: Lorna Imbat
Physically Logged By: Helena Ueng
Checklist Completed By: Helena Ueng
Carrier Name: GLS

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Applicable

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Applicable
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes
Container/Temp Blank temperature in compliance?	Temperature: 10.0 °C
Water-VOA vials have zero headspace?	
Water-pH acceptable upon receipt?	N/A
pH Checked by: N/A	pH Adjusted by: N/A

Comments:
Samples transported w/ice (melted ice water upon receipt).

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Torrent LABORATORY, INC.

Login Summary Report

Client ID:	TL5198	Pace Analytical Services,Inc	**TAT Requested:**	10 Day:10
Project Name:	Rialto		**Date Received:**	3/1/2022
Project # :	2202427		**Time Received:**	12:28 pm
Report Due Date:	3/15/2022			

Comments:

Work Order # : DoD2203001

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
DoD2203001-001A	MW-17-4-020322	02/03/22 9:15	Water	03/20/22			DoD_314.0_W	
Sample Note:	Level 4 report (Not a DoD project, but needs DoD report format) *Use sample -008 for MS/MSD **Samples expire 3/3/22!!							
DoD2203001-002A	MW-17-3-020322	02/03/22 9:55	Water	03/20/22			DoD_314.0_W	
DoD2203001-003A	MW-17-2-020322	02/03/22 10:30	Water	03/20/22			DoD_314.0_W	
DoD2203001-004A	DUP-4-1Q22	02/03/22 10:40	Water	03/20/22			DoD_314.0_W	
DoD2203001-005A	EB-4-020322	02/03/22 13:35	Water	03/20/22			DoD_314.0_W	
DoD2203001-006A	MW-18-5-020322	02/03/22 12:00	Water	03/20/22			DoD_314.0_W	
DoD2203001-007A	MW-18-4-020322	02/03/22 12:40	Water	03/20/22			DoD_314.0_W	
DoD2203001-008A	MW-18-3-020322	02/03/22 13:15	Water	03/20/22			DoD_314.0_W	
Sample Note:	DoD2203001-008A: Run MS/MSD							
DoD2203001-009A	MW-18-2-020322	02/03/22 13:45	Water	03/20/22			DoD_314.0_W	

Torrent LABORATORY, INC.

Chain of Custody

Torrent LABORATORY, INC.
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
FAX: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO: DOD220300 1

Company Name: Pace Analytical	☐ Env. ☐ Special	Project #: 2202427	PO#: 2202427
Address: 4100 Atlas Ct.		Project Name: Rialto	
City: Bakersfield	State: CA	Zip Code: 93308	Comments: Global Id: SL0607131601, Log Code: GASD
Telephone: (661) 327-4911	Cell:		SAMPLER:
REPORT TO: Natalie Serda	BILL TO: Pace Analytical		EMAIL: Natalie.Serda@pacelabs.com

TURNAROUND TIME: ☒ 10 Work Days ☐ 4 Work Days ☐ 1 Work Day ☐ 7 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day ☐ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours

SAMPLE TYPE: ☐ Storm Water ☐ Air ☐ Waste Water ☐ Wipe ☒ Ground Water ☐ Other ☐ Soil ☐ Product / Bulk

REPORT FORMAT: ☐ Level II - Std. ☐ Excel - EDD ☒ EDF ☐ Std.-EDD ☒ QC Level III ☒ QC Level IV

ANALYSIS REQUESTED: 314.0 Perchlorate (ug/L)

LAB ID	CANISTER I.D.	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	314.0	REMARKS
001A	2202427-02	MW-17-4-020322	2/3/2022 9:15	GW	1	PE	✔	Level III
002A	2202427-03	MW-17-3-020322	2/3/2022 9:55	GW	1	PE	✔	Level III
003A	2202427-04	MW-17-2-020322	2/3/2022 10:30	GW	1	PE	✔	Level III
004A	2202427-05	DUP-4-1Q22	2/3/2022 10:40	GW	1	PE	✔	Level III
005A	2202427-06	EB-4-020322	2/3/2022 1:35	GW	1	PE	✔	Level III
006A	2202427-07	MW-18-5-020322	2/3/2022 12:00	GW	1	PE	✔	Level III
007A	2202427-08	MW-18-4-020322	2/3/2022 12:40	GW	1	PE	✔	Level III
008A	2202427-09	MW-18-3-020322	2/3/2022 1:15	GW	1	PE	✔	MS/MSD Level IV
009A	2202427-10	MW-18-2-020322	2/3/2022 1:45	GW	1	PE	✔	Level III

LEVEL IV

	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:
1		Sandra Marquez	2-28-22	11:30				
2		Cristina	3-1-22	1228		L-D-Imbat	3-1-22	1228

Were Samples Received in Good Condition? ☐ Yes ☐ NO Samples on Ice? ☒ Yes ☐ NO Method of Shipment: GLS Sample seals intact? ☐ Yes ☐ NO ☒ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

Log In By: _____ Date: _____ Labeled By: _____ Date: _____ Temp 9-6 #3 °C Page ___ of ___ Rev. 3

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Torrent LABORATORY, INC.

SAMPLE RESULTS DATA

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/01/22, 12:28 pm
Date Reported: 03/15/22

Client Sample ID:	MW-17-4-020322	**Lab Sample ID:**	DoD2203001-001A
Project Name/Location:	Rialto	**Sample Matrix:**	Groundwater
Project Number:	2202427		
Date/Time Sampled:	02/03/22 / 9:15		
SDG:	SDGDoD2203001		
Tag Number:	2202427-02		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**4.90**		ug/L	03/03/22	2:57	PH	464319

Client Sample ID:	MW-17-3-020322	**Lab Sample ID:**	DoD2203001-002A
Project Name/Location:	Rialto	**Sample Matrix:**	Groundwater
Project Number:	2202427		
Date/Time Sampled:	02/03/22 / 9:55		
SDG:	SDGDoD2203001		
Tag Number:	2202427-03		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**1.87**	J	ug/L	03/03/22	4:10	PH	464319

Client Sample ID:	MW-17-2-020322	**Lab Sample ID:**	DoD2203001-003A
Project Name/Location:	Rialto	**Sample Matrix:**	Groundwater
Project Number:	2202427		
Date/Time Sampled:	02/03/22 / 10:30		
SDG:	SDGDoD2203001		
Tag Number:	2202427-04		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**8.47**		ug/L	03/03/22	4:35	PH	464319

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/01/22, 12:28 pm
Date Reported: 03/15/22

Client Sample ID:	DUP-4-1Q22	**Lab Sample ID:**	DoD2203001-004A
Project Name/Location:	Rialto	**Sample Matrix:**	Groundwater
Project Number:	2202427		
Date/Time Sampled:	02/03/22 / 10:40		
SDG:	SDGDoD2203001		
Tag Number:	2202427-05		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/03/22	5:00	PH	464319

Client Sample ID:	EB-4-020322	**Lab Sample ID:**	DoD2203001-005A
Project Name/Location:	Rialto	**Sample Matrix:**	Groundwater
Project Number:	2202427		
Date/Time Sampled:	02/03/22 / 13:35		
SDG:	SDGDoD2203001		
Tag Number:	2202427-06		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/03/22	5:24	PH	464319

Client Sample ID:	MW-18-5-020322	**Lab Sample ID:**	DoD2203001-006A
Project Name/Location:	Rialto	**Sample Matrix:**	Groundwater
Project Number:	2202427		
Date/Time Sampled:	02/03/22 / 12:00		
SDG:	SDGDoD2203001		
Tag Number:	2202427-07		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**5.92**		ug/L	03/03/22	6:38	PH	464319

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/01/22, 12:28 pm
Date Reported: 03/15/22

Client Sample ID:	MW-18-4-020322	**Lab Sample ID:**	DoD2203001-007A
Project Name/Location:	Rialto	**Sample Matrix:**	Groundwater
Project Number:	2202427		
Date/Time Sampled:	02/03/22 / 12:40		
SDG:	SDGDoD2203001		
Tag Number:	2202427-08		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**12.8**		ug/L	03/03/22	7:03	PH	464319

Client Sample ID:	MW-18-3-020322	**Lab Sample ID:**	DoD2203001-008A
Project Name/Location:	Rialto	**Sample Matrix:**	Groundwater
Project Number:	2202427		
Date/Time Sampled:	02/03/22 / 13:15		
SDG:	SDGDoD2203001		
Tag Number:	2202427-09		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/03/22	7:28	PH	464319

Client Sample ID:	MW-18-2-020322	**Lab Sample ID:**	DoD2203001-009A
Project Name/Location:	Rialto	**Sample Matrix:**	Groundwater
Project Number:	2202427		
Date/Time Sampled:	02/03/22 / 13:45		
SDG:	SDGDoD2203001		
Tag Number:	2202427-10		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**16.7**		ug/L	03/03/22	7:52	PH	464319

SAMPLE QC DATA

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	DoD2203001	**Prep Method:**	314.0WP	**Prep Date:**	03/02/22	**Prep Batch:**	1139936
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	18:00	**Analytical Batch:**	464319
Units:	ug/L			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	1139936-MB3
Analyzed Date:	3/3/2022	**Analyzed Time:**	1:43	**Analyzed By:**	PH		

Parameters	DL	LOD	LOQ	Method Blank Conc.	Lab Qualifier
Perchlorate	0.800	2.00	4.00	2.00	J

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Torrent LABORATORY, INC.

LCS/LCSD Summary Report

		Prep Method:	314.0WP	**Prep Date:**	03/02/22	**Prep Batch:**	1139936
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	18:00	**Analytical Batch:**	464319
Units:	ug/L			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	1139936-LCS3
Analyzed Date:	3/3/2022	**Analyzed Time:**	2:32	**Analyzed By:**	PH		

Parameters	Spike Conc.	LCS % Recovery	LCSD % Recovery	% Recovery Limits	LCS/LCSD % RPD	% RPD Limits	Lab Qualifier
Perchlorate	50	96.1	95.8	84 - 119	0.209	15	

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Torrent LABORATORY, INC.

MS/MSD Summary Report

Work Order:	DoD2203001	**Prep Method:**	314.0WP	**Prep Date:**	03/02/22	**Prep Batch:**	1139936
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	18:00	**Analytical Batch:**	464319
Spiked Sample:	DoD2203001-001A			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	DoD2203001-001A-MSD-1139936
Units:	ug/L						
Analyzed Date:	3/3/2022	**Analyzed Time:**	3:46	**Analyzed By:**	PH		

Parameters	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	% Recovery Limits	MS/MSD % RPD	% RPD Limits	Lab Qualifier
Perchlorate	4.90	50	137	133	84 - 119	2.90	15	J,Q

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End of Level II Report for SDG SDGDoD2203001

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell	**Reported:** 03/24/2022 11:47
3761 Attucks Drive	Project: JPL- GW Monitoring Wells-CLP
Powell, OH 43065	Project Number: 1Q22
	Project Manager: David Conner

Notes And Definitions

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

Date of Report: 03/24/2022

David Conner

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Client Project: 1Q22
BCL Project: JPL- GW Monitoring Wells-CLP
BCL Work Order: 2202498
Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 2/4/2022. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1001286927

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Operations Manager

Table of Contents

Chain of Custody Form

BC Laboratories, Inc.

22-02498

*Required Fields

Page 1 of 1

Report To: Client:* Tidewater, Inc.	Project Description:* JPL-GW Monitoring
Attn:* David Conner	
Street Address:* 3761 Attucks Drive	Project Code:* 4Q21
City:* Powell State:* OH Zip:* 43065	
Phone#:* 626) 298 - 5715 Fax#: 614) 792 - 2897	Sampler (s):* Blaine Tech L. Henderson
Email Address: david.conner@tideh2o.net	
Submission #:	

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 -218.6 (mg/L)	Cl, NO3, NO2, SO4		Orthophosphate 365.1			
-1	TB-S-020422	2/4/22	0900	W	X									
-2	MW-14-S-020422		0900		X		X							
-3	MW-14-D-020422		0930		X		X							
-4	MW-14-3-020422		1000		X	X	X	X						
-5	MW-14-2-020422		1020		X	X	X	X						
-6	MW-26-2-020422		1145		X	X	X	X						
-7	EB-S-020422		1216		X	X	X	X						

Analysis Requested

Billing

Client:* Tidewater
Attn:* David Conner
Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065

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

*Standard Turnaround = 10

Notes

CHK BY DISTRIBUTION
ZEL WHITE YELLOW PINK
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:	2/4/22	1315	1. Received By: Gabe Bloomberg	2-4-22	1445
2. Relinquished By:	2-4-22	1545	2. Received By:	2/4/22	1545
3. Relinquished By:	2/4/22	1740	3. Received By:	2/4/22	1740

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

Chain of Custody and Cooler Receipt Form for 2202498 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 22-02498

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐	Ice Chest ☑ None ☐ Box ☐	YES ☑ NO ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____	Other ☐ (Specify)_____	(W) / S

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: 0.98 Container: PE Thermometer ID: 274

Temperature: (A) 0.6 °C / (C) 0.3 °C

Date/Time 2/4/22 1740

Analyst Init PRE

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / (16oz) PE UNPRES		D	D	E	E	E	E			
2oz Cr+6				D	D	D	D			
QT INORGANIC CHEMICAL METALS				F	F	F	F	PRE 2/4/22		
INORGANIC CHEMICAL METALS 4oz (8oz) / 16oz				F	F	F	F			
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz- NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		A-C	A-C	A-C	A-C	A-C	A-C			
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: PRE Date/Time: 2/4/22 1840

A = Actual / C = Corrected

Rev 22 04/13/21

[S:\WPDocs\Word\Perfect\LAB_DOCS\FORMS\SAMREC rev 22]

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202498-01	**COC Number:**	---	**Receive Date:**	02/04/2022 17:40
	Project Number:	NASA/JPL	**Sampling Date:**	02/04/2022 08:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-5-020422	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-5-020422	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202498-02	**COC Number:**	---	**Receive Date:**	02/04/2022 17:40
	Project Number:	NASA/JPL	**Sampling Date:**	02/04/2022 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-5-020422	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-5-020422	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202498-03	**COC Number:**	---	**Receive Date:**	02/04/2022 17:40
	Project Number:	NASA/JPL	**Sampling Date:**	02/04/2022 09:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-4-020422	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-4-020422	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202498-04	**COC Number:**	---	**Receive Date:**	02/04/2022 17:40
	Project Number:	NASA/JPL	**Sampling Date:**	02/04/2022 10:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-3-020422	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-3-020422	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202498-05	**COC Number:**	---	**Receive Date:**	02/04/2022 17:40
	Project Number:	NASA/JPL	**Sampling Date:**	02/04/2022 10:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-2-020422	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-2-020422	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202498-06	**COC Number:**	---	**Receive Date:**	02/04/2022 17:40
	Project Number:	NASA/JPL	**Sampling Date:**	02/04/2022 11:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-26-2-020422	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-26-2-020422	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

2202498-07

COC Number: ---
Project Number: NASA/JPL
Sampling Location: ---
Sampling Point: EB-5-020422
Sampled By: BTST

Receive Date: 02/04/2022 17:40
Sampling Date: 02/04/2022 12:10
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Delivery Work Order:
Global ID: 0000000000
Location ID (FieldPoint): EB-5-020422
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-01 | **Client Sample Name:** NASA/JPL, TB-5-020422, 2/4/2022 8:00:00AM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-01 | **Client Sample Name:** NASA/JPL, TB-5-020422, 2/4/2022 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-01 | **Client Sample Name:** NASA/JPL, TB-5-020422, 2/4/2022 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 17:29	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202498-01 | **Client Sample Name:** NASA/JPL, TB-5-020422, 2/4/2022 8:00:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 17:29	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-02 | **Client Sample Name:** NASA/JPL, MW-14-5-020422, 2/4/2022 9:00:00AM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-02 | **Client Sample Name:** NASA/JPL, MW-14-5-020422, 2/4/2022 9:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-02 | **Client Sample Name:** NASA/JPL, MW-14-5-020422, 2/4/2022 9:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 17:53	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202498-02 | **Client Sample Name:** NASA/JPL, MW-14-5-020422, 2/4/2022 9:00:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 17:53	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-03 | **Client Sample Name:** NASA/JPL, MW-14-4-020422, 2/4/2022 9:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.31**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND	V11	1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-03 | **Client Sample Name:** NASA/JPL, MW-14-4-020422, 2/4/2022 9:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.30**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.34**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-03 | **Client Sample Name:** NASA/JPL, MW-14-4-020422, 2/4/2022 9:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 18:17	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202498-03 | **Client Sample Name:** NASA/JPL, MW-14-4-020422, 2/4/2022 9:30:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 18:17	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-04 | **Client Sample Name:** NASA/JPL, MW-14-3-020422, 2/4/2022 10:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.68**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND	V11	1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.40**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-04 | **Client Sample Name:** NASA/JPL, MW-14-3-020422, 2/4/2022 10:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.94**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	**0.25**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND	**J**	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**1.2**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-04 | **Client Sample Name:** NASA/JPL, MW-14-3-020422, 2/4/2022 10:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 18:42	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202498-04 | **Client Sample Name:** NASA/JPL, MW-14-3-020422, 2/4/2022 10:00:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 18:42	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202498-04 | **Client Sample Name:** NASA/JPL, MW-14-3-020422, 2/4/2022 10:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00024**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	**0.94**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 18:23	MKB	IC-4	1	B131424	No Prep
2	EPA-200.8	02/09/22 20:35	02/10/22 11:52	KHS	PE-EL2	1	B131479	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-05 | **Client Sample Name:** NASA/JPL, MW-14-2-020422, 2/4/2022 10:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.65**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND	V11	1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.15**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-05 | **Client Sample Name:** NASA/JPL, MW-14-2-020422, 2/4/2022 10:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.55**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**1.8**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-05 | **Client Sample Name:** NASA/JPL, MW-14-2-020422, 2/4/2022 10:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 19:06	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202498-05 | **Client Sample Name:** NASA/JPL, MW-14-2-020422, 2/4/2022 10:20:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 19:06	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202498-05 | **Client Sample Name:** NASA/JPL, MW-14-2-020422, 2/4/2022 10:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00017**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	**0.88**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 21:15	KB1	IC-4	1	B131424	No Prep
2	EPA-200.8	02/09/22 20:35	02/10/22 11:55	KHS	PE-EL2	1	B131479	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-06 | **Client Sample Name:** NASA/JPL, MW-26-2-020422, 2/4/2022 11:45:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**1.8**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND	V11	1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.27**	**ug/L**	**0.50**	**0.27**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-06 | **Client Sample Name:** NASA/JPL, MW-26-2-020422, 2/4/2022 11:45:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**2.0**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.29**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-06 | **Client Sample Name:** NASA/JPL, MW-26-2-020422, 2/4/2022 11:45:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 19:31	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202498-06 | **Client Sample Name:** NASA/JPL, MW-26-2-020422, 2/4/2022 11:45:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 19:31	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202498-06 | **Client Sample Name:** NASA/JPL, MW-26-2-020422, 2/4/2022 11:45:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000058**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	**1.5**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 21:25	KB1	IC-4	1	B131424	No Prep
2	EPA-200.8	02/09/22 20:35	02/10/22 11:56	KHS	PE-EL2	1	B131479	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-07 | **Client Sample Name:** NASA/JPL, EB-5-020422, 2/4/2022 12:10:00PM

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

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-07 | **Client Sample Name:** NASA/JPL, EB-5-020422, 2/4/2022 12:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202498-07 | **Client Sample Name:** NASA/JPL, EB-5-020422, 2/4/2022 12:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	117	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 19:55	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202498-07 | **Client Sample Name:** NASA/JPL, EB-5-020422, 2/4/2022 12:10:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 19:55	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202498-07 | **Client Sample Name:** NASA/JPL, EB-5-020422, 2/4/2022 12:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000068**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	**0.80**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 18:04	MKB	IC-4	1	B131424	No Prep
2	EPA-200.8	02/09/22 20:35	02/10/22 11:58	KHS	PE-EL2	1	B131479	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131502						
Benzene	B131502-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B131502-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B131502-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B131502-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B131502-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B131502-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B131502-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B131502-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B131502-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B131502-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B131502-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B131502-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B131502-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B131502-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B131502-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B131502-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B131502-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B131502-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B131502-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B131502-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B131502-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B131502-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B131502-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B131502-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B131502-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B131502-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B131502-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B131502-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B131502-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B131502-BLK1	ND	ug/L	0.50	0.14	

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Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131502						
trans-1,3-Dichloropropene	B131502-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B131502-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B131502-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B131502-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B131502-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B131502-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B131502-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B131502-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B131502-BLK1	ND	ug/L	0.50	0.12	
Styrene	B131502-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B131502-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B131502-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B131502-BLK1	ND	ug/L	0.50	0.23	
Toluene	B131502-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B131502-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B131502-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B131502-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B131502-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B131502-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B131502-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B131502-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B131502-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B131502-BLK1	ND	ug/L	0.50	0.18	
Acetone	B131502-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B131502-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B131502-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B131502-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B131502-BLK1	ND	ug/L	2.0	2.0	
Carbon disulfide	B131502-BLK1	ND	ug/L	0.50	0.48	
trans-1,4-Dichloro-2-butene	B131502-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B131502-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B131502-BLK1	ND	ug/L	4.0	1.3	

Tidewater Inc. - Powell
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Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B131502						
Ethyl t-butyl ether	B131502-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B131502-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B131502-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B131502-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B131502-BLK1	ND	ug/L	5.0	3.3	
Methyl iodide	B131502-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B131502-BLK1	ND	ug/L	5.0	2.4	
Methyl methacrylate	B131502-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B131502-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B131502-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B131502-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B131502-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B131502-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	**B131502-BLK1**	**112**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B131502-BLK1**	**98.4**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B131502-BLK1**	**95.0**	%	**80 - 120 (LCL - UCL)**		

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131502										
Benzene	B131502-BS1	LCS	22.970	25.000	ug/L	91.9		70 - 130		
Bromodichloromethane	B131502-BS1	LCS	24.700	25.000	ug/L	98.8		70 - 130		
Chlorobenzene	B131502-BS1	LCS	22.870	25.000	ug/L	91.5		70 - 130		
Chloroethane	B131502-BS1	LCS	22.140	25.000	ug/L	88.6		70 - 130		
1,4-Dichlorobenzene	B131502-BS1	LCS	23.720	25.000	ug/L	94.9		70 - 130		
1,1-Dichloroethane	B131502-BS1	LCS	23.320	25.000	ug/L	93.3		70 - 130		
1,1-Dichloroethene	B131502-BS1	LCS	25.280	25.000	ug/L	101		70 - 130		
Toluene	B131502-BS1	LCS	22.890	25.000	ug/L	91.6		70 - 130		
Trichloroethene	B131502-BS1	LCS	23.650	25.000	ug/L	94.6		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B131502-BS1	LCS	10.760	10.000	ug/L	108		75 - 125		
Toluene-d8 (Surrogate)	B131502-BS1	LCS	9.9300	10.000	ug/L	99.3		80 - 120		
4-Bromofluorobenzene (Surrogate)	B131502-BS1	LCS	10.510	10.000	ug/L	105		80 - 120		

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131502	Used client sample: N										
Benzene	MS	2202601-02	ND	23.880	25.000	ug/L		95.5		70 - 130	
	MSD	2202601-02	ND	23.590	25.000	ug/L	1.2	94.4	20	70 - 130	
Bromodichloromethane	MS	2202601-02	ND	26.090	25.000	ug/L		104		70 - 130	
	MSD	2202601-02	ND	24.420	25.000	ug/L	6.6	97.7	20	70 - 130	
Chlorobenzene	MS	2202601-02	ND	23.660	25.000	ug/L		94.6		70 - 130	
	MSD	2202601-02	ND	23.240	25.000	ug/L	1.8	93.0	20	70 - 130	
Chloroethane	MS	2202601-02	ND	22.590	25.000	ug/L		90.4		70 - 130	
	MSD	2202601-02	ND	21.850	25.000	ug/L	3.3	87.4	20	70 - 130	
1,4-Dichlorobenzene	MS	2202601-02	ND	24.340	25.000	ug/L		97.4		70 - 130	
	MSD	2202601-02	ND	24.010	25.000	ug/L	1.4	96.0	20	70 - 130	
1,1-Dichloroethane	MS	2202601-02	ND	24.580	25.000	ug/L		98.3		70 - 130	
	MSD	2202601-02	ND	24.280	25.000	ug/L	1.2	97.1	20	70 - 130	
1,1-Dichloroethene	MS	2202601-02	ND	26.420	25.000	ug/L		106		70 - 130	
	MSD	2202601-02	ND	25.690	25.000	ug/L	2.8	103	20	70 - 130	
Toluene	MS	2202601-02	ND	24.370	25.000	ug/L		97.5		70 - 130	
	MSD	2202601-02	ND	23.710	25.000	ug/L	2.7	94.8	20	70 - 130	
Trichloroethene	MS	2202601-02	0.19000	25.150	25.000	ug/L		99.8		70 - 130	
	MSD	2202601-02	0.19000	24.470	25.000	ug/L	2.7	97.1	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2202601-02	ND	10.710	10.000	ug/L		107		75 - 125	
	MSD	2202601-02	ND	10.300	10.000	ug/L	3.9	103		75 - 125	
Toluene-d8 (Surrogate)	MS	2202601-02	ND	10.010	10.000	ug/L		100		80 - 120	
	MSD	2202601-02	ND	9.8100	10.000	ug/L	2.0	98.1		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	2202601-02	ND	10.210	10.000	ug/L		102		80 - 120	
	MSD	2202601-02	ND	10.230	10.000	ug/L	0.2	102		80 - 120	

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3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131502						
Chloroacetonitrile	B131502-BLK1	0	ug/L			
1-Chlorobutane	B131502-BLK1	0	ug/L			
1,1-Dichloropropanone	B131502-BLK1	0	ug/L			
Methyl acrylate	B131502-BLK1	0	ug/L			
Nitrobenzene	B131502-BLK1	0	ug/L			
2-Nitropropane	B131502-BLK1	0	ug/L			

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3761 Attucks Drive
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131424						
Hexavalent Chromium	B131424-BLK1	ND	mg/L	0.00020	0.000020	
QC Batch ID: B131479						
Total Recoverable Chromium	B131479-BLK1	ND	ug/L	3.0	0.50	

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Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131424										
Hexavalent Chromium	B131424-BS1	LCS	0.020312	0.020000	mg/L	102		90 - 110		
QC Batch ID: B131479										
Total Recoverable Chromium	B131479-BS1	LCS	42.353	40.000	ug/L	106		85 - 115		

Pace Analytical
ENVIRONMENTAL SCIENCES

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131424	Used client sample: N										
Hexavalent Chromium	DUP	2202601-02	0.000044000	0.000052000		mg/L	16.7		10		J,A02
	MS	2202601-02	0.000044000	0.020556	0.020202	mg/L		102		90 - 110	
	MSD	2202601-02	0.000044000	0.019655	0.020202	mg/L	4.5	97.1	10	90 - 110	
QC Batch ID: B131479	Used client sample: N										
Total Recoverable Chromium	DUP	2202449-01	1.1070	0.86500		ug/L	24.5		20		J,A02
	MS	2202449-01	1.1070	37.578	40.000	ug/L		91.2		70 - 130	
	MSD	2202449-01	1.1070	41.062	40.000	ug/L	8.9	99.9	20	70 - 130	

Torrent LABORATORY, INC.

ANALYTICAL SUMMARY DATA PACKAGE

Level II

SDG # DoD2203002

Project Name: NASA/JPL

SUBMITTAL TO:

Natalie Serda
Pace Analytical Services,Inc
940 S Harney Street
Seattle, Washington 98108

SUBMITTAL BY:

Torrent Laboratory, Inc.
483 Sinclair Frontage Road
Milpitas, CA 95035
Tel (408)263-5258
Fax (408)263-8293

LABORATORY CONTACT PERSON:

Project Manager: KEVANS
Tel (408) 263-5258
Fax (408) 263-2708
Email: pm@torrentlaboratory.com
Original Report Date: 3/15/2022
Report Revision:
Revision Date:

Total Pages: 14

THIS DOCUMENT MEETS DoD QSM 5.3 STANDARDS

The results relate to only the samples associated with the referenced SDG. The submitted data has been produced in accordance with laboratory procedures. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Torrent Laboratory, Inc

Kathie Evans
Project Manager

March 15, 2022
Date

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Torrent LABORATORY, INC.

TABLE OF CONTENTS

Torrent LABORATORY, INC.

CASE NARRATIVE

No issues were encountered with receiving, preparation, analysis or reporting of the results associated with this work order.

Reported method per client SOW PG&E 2019 Cntl Coast

Analytical Comments for method 314.0
None

LAB QUALIFIERS

U - Analyte was not detected and is reported as less than the MDL or as defined by the customer. The MDL has been adjusted for any dilution or concentration of the sample.

J - The reported result is an estimated value (the sample concentration is between the established MDL and the client specified PQL).

B - Blank contamination. The recorded result is associated with a blank with a detected value at greater than 1/2 the PQL.

D - Sample/surrogate spike concentration not reportable due to required dilution of the sample.

E - The reported result is an estimated result. The reported result was outside of the calibration range of the instrument but within linear range.

NR - Not Recoverable. The sample concentration is greater than four times the spike concentration.

Q or S - One or more quality control criteria failed (e.g., LCS recovery, surrogate spike)

Torrent LABORATORY, INC.

Sample Receipt Checklist

Client Name: Pace Analytical Services,Inc
Project Name: NASA/JPL
Work Order No.: DoD2203002

Date and Time Received: 3/1/2022
Received By: Lorna Imbat
Physically Logged By: Helena Ueng
Checklist Completed By: Helena Ueng
Carrier Name: GLS

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Applicable

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Applicable
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes
Container/Temp Blank temperature in compliance?	Temperature: 10.0 °C
Water-VOA vials have zero headspace?	
Water-pH acceptable upon receipt?	N/A

pH Checked by: N/A pH Adjusted by: N/A

Comments:
Samples transported w/ice (melted ice water upon receipt).

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Torrent LABORATORY, INC.

Login Summary Report

Client ID:	TL5198	Pace Analytical Services,Inc	**TAT Requested:**	10 Day:10
Project Name:	NASA/JPL		**Date Received:**	3/1/2022
Project # :	2202498		**Time Received:**	12:28 pm
Report Due Date:	3/15/2022			

Comments:

Work Order # : DoD2203002

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
DoD2203002-001A	MW-14-5-020422	02/04/22 9:00	Water	03/21/22			DoD_314.0_W	
Sample Note:	Level 3 report (Not a DoD project, but needs DoD report format) **Samples expire 3/4!!							
DoD2203002-002A	MW-14-4-020422	02/04/22 9:30	Water	03/21/22			DoD_314.0_W	
DoD2203002-003A	MW-14-3-020422	02/04/22 10:00	Water	03/21/22			DoD_314.0_W	
DoD2203002-004A	MW-14-2-020422	02/04/22 10:20	Water	03/21/22			DoD_314.0_W	
DoD2203002-005A	MW-26-2-020422	02/04/22 11:45	Water	03/21/22			DoD_314.0_W	
DoD2203002-006A	EB-5-020422	02/04/22 12:10	Water	03/21/22			DoD_314.0_W	

Torrent LABORATORY, INC.

Chain of Custody

Torrent LABORATORY, INC.
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
FAX: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

DOD2203002
LAB WORK ORDER NO
DOD2203001

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

Company Name: Pace Analytical	☐ Env. ☐ Special	Project #: 2202498	PO#: 2202498
Address: 4100 Atlas Ct.		Project Name: NASA/JPL	
City: Bakersfield	State: CA	Zip Code: 93308	Comments: Global Id: 000000000 , Log Code: BTST
Telephone: (661) 327-4911	Cell:		SAMPLER:
REPORT TO: Natalie Serda	BILL TO: Pace Analytical		EMAIL: Natalie.Serda@pacelabs.com

TURNAROUND TIME: ☒ 10 Work Days ☐ 4 Work Days ☐ 1 Work Day ☐ 7 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day ☐ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours

SAMPLE TYPE: ☐ Storm Water ☐ Air ☐ Waste Water ☐ Wipe ☑ Ground Water ☐ Other ☐ Soil ☐ Product / Bulk

REPORT FORMAT: ☐ Level II - Std. ☐ Excel - EDD ☑ EDF ☐ Std.-EDD ☑ QC Level III ☐ QC Level IV

314.0 Perchlorate (ug/L)

ANALYSIS REQUESTED

LAB ID	CANISTER I.D.	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	314.0	REMARKS
001A	2202498-02	MW-14-5-020422	2/4/2022 9:00	W	1	PE	✓	Level III
002A	2202498-03	MW-14-4-020422	2/4/2022 9:30	W	1	PE	✓	Level III
003A	2202498-04	MW-14-3-020422	2/4/2022 10:00	W	1	PE	✓	Level III
004A	2202498-05	MW-14-2-020422	2/4/2022 10:20	W	1	PE	✓	Level III
005A	2202498-06	MW-26-2-020422	2/4/2022 11:45	W	1	PE	✓	Level III
006A	2202498-07	EB-5-020422	2/4/2022 12:10	W	1	PE	✓	Level III

LEVEL III

	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:
1		Sandra Marquez	2-28-22	11:30				
2	GLS	GLS	3-1-22	1228		L.D. Imbat	3-1-22	1228

Were Samples Received in Good Condition? ☒ Yes ☐ NO Samples on Ice? ☒ Yes ☐ NO Method of Shipment GLS Sample seals intact? ☐ Yes ☐ NO ☒ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

Log In By: _____ Date: _____ Labeled By: _____ Date: _____ Temp 9.6 °C #3 Page ___ of ___ Rev. 3

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Torrent LABORATORY, INC.

SAMPLE RESULTS DATA

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/01/22, 12:28 pm
Date Reported: 03/15/22

Client Sample ID:	MW-14-5-020422	**Lab Sample ID:**	DoD2203002-001A
Project Name/Location:	NASA/JPL	**Sample Matrix:**	Groundwater
Project Number:	2202498		
Date/Time Sampled:	02/04/22 / 9:00		
SDG:	SDGDoD2203002		
Tag Number:	2202498-02		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**3.85**	J	ug/L	03/03/22	8:17	PH	464319

Client Sample ID:	MW-14-4-020422	**Lab Sample ID:**	DoD2203002-002A
Project Name/Location:	NASA/JPL	**Sample Matrix:**	Groundwater
Project Number:	2202498		
Date/Time Sampled:	02/04/22 / 9:30		
SDG:	SDGDoD2203002		
Tag Number:	2202498-03		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**4.00**		ug/L	03/03/22	8:42	PH	464319

Client Sample ID:	MW-14-3-020422	**Lab Sample ID:**	DoD2203002-003A
Project Name/Location:	NASA/JPL	**Sample Matrix:**	Groundwater
Project Number:	2202498		
Date/Time Sampled:	02/04/22 / 10:00		
SDG:	SDGDoD2203002		
Tag Number:	2202498-04		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**12.0**		ug/L	03/03/22	9:06	PH	464319

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/01/22, 12:28 pm
Date Reported: 03/15/22

Client Sample ID:	MW-14-2-020422	**Lab Sample ID:**	DoD2203002-004A
Project Name/Location:	NASA/JPL	**Sample Matrix:**	Groundwater
Project Number:	2202498		
Date/Time Sampled:	02/04/22 / 10:20		
SDG:	SDGDoD2203002		
Tag Number:	2202498-05		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**6.48**		ug/L	03/03/22	9:31	PH	464319

Client Sample ID:	MW-26-2-020422	**Lab Sample ID:**	DoD2203002-005A
Project Name/Location:	NASA/JPL	**Sample Matrix:**	Groundwater
Project Number:	2202498		
Date/Time Sampled:	02/04/22 / 11:45		
SDG:	SDGDoD2203002		
Tag Number:	2202498-06		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**17.5**		ug/L	03/03/22	9:56	PH	464319

Client Sample ID:	EB-5-020422	**Lab Sample ID:**	DoD2203002-006A
Project Name/Location:	NASA/JPL	**Sample Matrix:**	Groundwater
Project Number:	2202498		
Date/Time Sampled:	02/04/22 / 12:10		
SDG:	SDGDoD2203002		
Tag Number:	2202498-07		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/2/22 6:00:00PM
Prep Batch ID:	1139936	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/03/22	10:20	PH	464319

Torrent LABORATORY, INC.

SAMPLE QC DATA

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	DoD2203002	**Prep Method:**	314.0WP	**Prep Date:**	03/02/22	**Prep Batch:**	1139936
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	18:00	**Analytical Batch:**	464319
Units:	ug/L			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	1139936-MB3
Analyzed Date:	3/3/2022	**Analyzed Time:**	1:43	**Analyzed By:**	PH		

Parameters	DL	LOD	LOQ	Method Blank Conc.	Lab Qualifier
Perchlorate	0.800	2.00	4.00	2.00	J

Page 11 of 13

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

		Prep Method:	314.0WP	**Prep Date:**	03/02/22	**Prep Batch:**	1139936
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	18:00	**Analytical Batch:**	464319
Units:	ug/L			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	1139936-LCS3
Analyzed Date:	3/3/2022	**Analyzed Time:**	2:32	**Analyzed By:**	PH		

Parameters	Spike Conc.	LCS % Recovery	LCSD % Recovery	% Recovery Limits	LCS/LCSD % RPD	% RPD Limits	Lab Qualifier
Perchlorate	50	96.1	95.8	84 - 119	0.209	15	

Page 12 of 13

Torrent LABORATORY, INC.

End of Level II Report for SDG SDGDoD2203002

Page 13 of 13

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell	**Reported:** 03/24/2022 11:48
3761 Attucks Drive	Project: JPL- GW Monitoring Wells-CLP
Powell, OH 43065	Project Number: 1Q22
	Project Manager: David Conner

Notes And Definitions

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

Date of Report: 03/24/2022

David Conner

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Client Project:	1Q22
BCL Project:	JPL- GW Monitoring Wells-CLP
BCL Work Order:	2202601
Invoice ID:	

Enclosed are the results of analyses for samples received by the laboratory on 2/7/2022. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1001286928

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Operations Manager

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

Table of Contents

Table of Contents

BC Laboratories, Inc. — Chain of Custody Form

*Required Fields 22-02601

Page 1 of 1

Report To: Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:* (626) 298 - 5715 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #:

Project Description:* JPL-GW Monitoring
Project Code:* 4Q21
Sampler (s):* Blaine Tech
L. Henderson

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

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 - 218.6 (mg/L)	Cl, NO3, NO2, SO4		Orthophosphate 365.1				Notes
-1	TB-6-020722	2/7/22	0900	D	X										
-2	MW-4-3		0900		X	X	X	X							MS/MSD level IV
-3	MW-4-2		1000		X	X	X	X							
-4	MW-4-1		1030		X	X	X	X							
-5	MW-11-4		1330		X		X								
-6	MW-11-3		1400		X	X	X	X							
-7	MW-11-2		1425		X	X	X	X							MS/MSD + level IV
-8	SB-2-020722		1445		X	X	X	X							
-9	EB-6-020722		1455		X	X	X	X							
-10	MW-11-1		1500		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: _____

	Relinquished By:	Date	Time	Received By:	Date	Time
1.		2/7/22	1546		2/7/22	1546
2.		2/7/22	1835		2/7/22	1835
3.						

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

CHK BY 2e1 DISTRIBUTION SUB-OUT ☐

SHORT HOLDING TIME: Cr+6 NO3 NO2 OP SS DO Cl2 BOD MBAS COT

Chain of Custody and Cooler Receipt Form for 2202601 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 22-02601

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

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

FREE LIQUID
YES ☐ NO ☐
(W) / S

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

Custody Seals: Ice Chest ☐ 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: 0.98 Container: PE Thermometer ID: 274

Temperature: (A) 2.4 °C / (C) 2.1 °C

Date/Time 2/7/22 1835

Analyst Init PRE

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / (6oz) PE UNPRES		I,J	E	E	D	E	I,J	E	E	E,F
2oz Cr+6		G,H	D	D		D	G,H	D	D	D
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / (8oz) 16oz		K,L	F	F		F	K,L	F	F	G
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		A-F	A-C	A-C	A-C	A-C	A-F	A-C	A-C	A-C
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:
Sample Numbering Completed By: PRE Date/Time: 2/7/22 1920
A = Actual / C = Corrected

Rev 22 04/13/21
[S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202601-01	**COC Number:**	---	**Receive Date:**	02/07/2022 18:35
	Project Number:	NASA/JPL	**Sampling Date:**	02/07/2022 08:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-6-020722	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Trip Blank
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-6-020722	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202601-02	**COC Number:**	---	**Receive Date:**	02/07/2022 18:35
	Project Number:	NASA/JPL	**Sampling Date:**	02/07/2022 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-3	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-4-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202601-03	**COC Number:**	---	**Receive Date:**	02/07/2022 18:35
	Project Number:	NASA/JPL	**Sampling Date:**	02/07/2022 10:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-2	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-4-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202601-04	**COC Number:**	---	**Receive Date:**	02/07/2022 18:35
	Project Number:	NASA/JPL	**Sampling Date:**	02/07/2022 10:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-1	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-4-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202601-05	**COC Number:**	---	**Receive Date:**	02/07/2022 18:35
	Project Number:	NASA/JPL	**Sampling Date:**	02/07/2022 13:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-4	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202601-06	**COC Number:**	---	**Receive Date:**	02/07/2022 18:35
	Project Number:	NASA/JPL	**Sampling Date:**	02/07/2022 14:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-3	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202601-07	**COC Number:**	---	**Receive Date:**	02/07/2022 18:35
	Project Number:	NASA/JPL	**Sampling Date:**	02/07/2022 14:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-2	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202601-08	**COC Number:**	---	**Receive Date:**	02/07/2022 18:35
	Project Number:	NASA/JPL	**Sampling Date:**	02/07/2022 14:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-2-020722	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): SB-2-020722	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202601-09	**COC Number:**	---	**Receive Date:**	02/07/2022 18:35
	Project Number:	NASA/JPL	**Sampling Date:**	02/07/2022 14:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-6-020722	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-6-020722	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

2202601-10

COC Number: ---
Project Number: NASA/JPL
Sampling Location: ---
Sampling Point: MW-11-1
Sampled By: BTST

Receive Date: 02/07/2022 18:35
Sampling Date: 02/07/2022 15:00
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Delivery Work Order:
Global ID: 0000000000
Location ID (FieldPoint): MW-11-1
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

Natalie Serda

From: David Conner <david.conner@tideh2o.net>
Sent: Tuesday, March 8, 2022 1:33 PM
To: Natalie Serda
Subject: RE: [EXTERNAL]Perchlorate 2202601, 2202850, 2203057 (GW's)

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Natalie,

Thanks for letting me know. Yes, please have them report past hold time.

Thank you,

David Conner, PG
Tidewater, Inc.
Cell: 626-298-5715

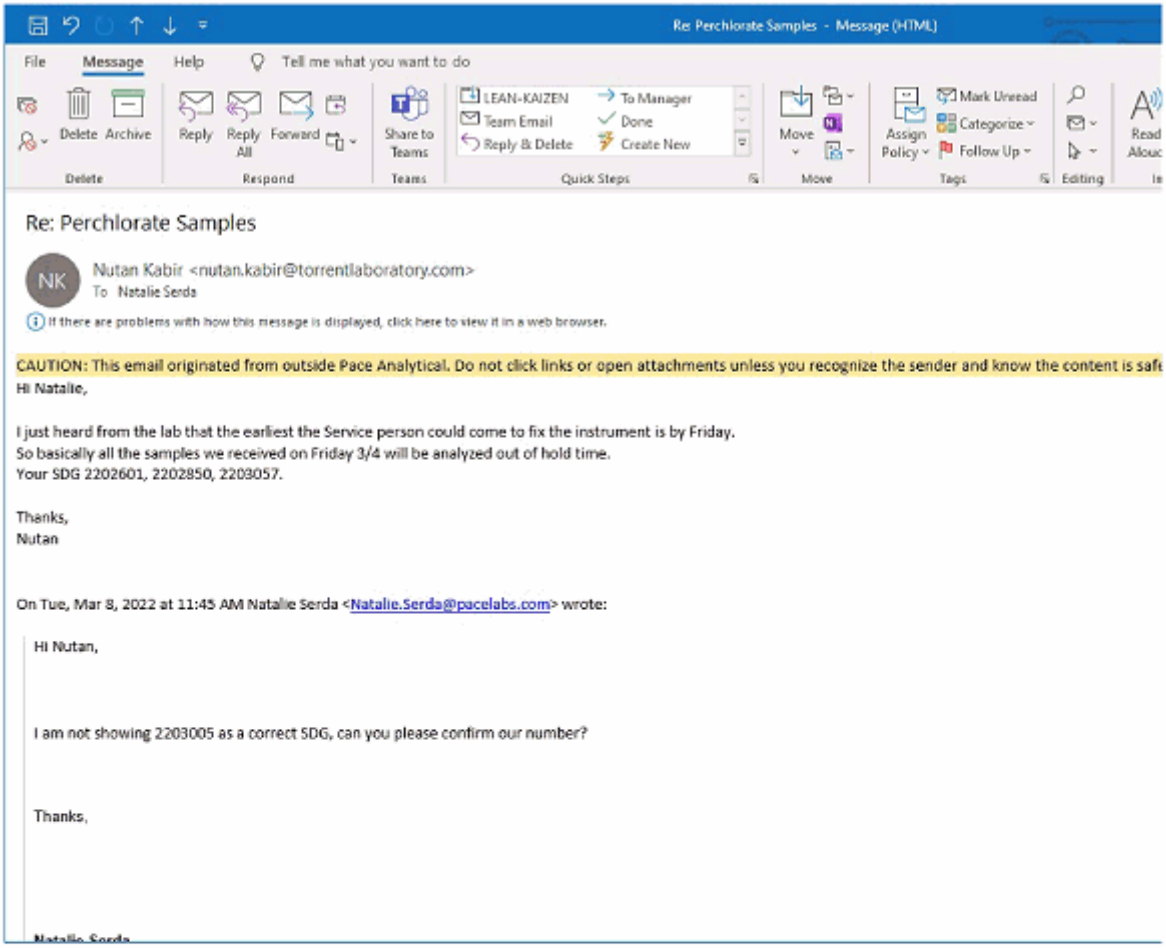
From: Natalie Serda <Natalie.Serda@pacelabs.com>
Sent: Tuesday, March 8, 2022 1:32 PM
To: David Conner <david.conner@tideh2o.net>
Subject: [EXTERNAL]Perchlorate 2202601, 2202850, 2203057 (GW's)
Importance: High

CAUTION: External email, DO NOT click on any links/attachments unless you recognize the sender and know the content is safe

Hi David,

I was advised that the sub lab we sent the perchlorates to for this SDG also just ran into instrument issues and were not able to run within the hold times. Please let me know if you would still like to have them reported past hold.

1



Re: Perchlorate Samples - Message (HTML)

File Message Help Tell me what you want to do

Delete Archive Reply Reply All Forward Share to Teams LEAN-KAIZEN Team Email Reply & Delete To Manager Done Create New Move Mark Unread Categorize Follow Up Assign Policy Read Aloud

Delete Respond Teams Quick Steps Move Tags Editing

Re: Perchlorate Samples

NK Nutan Kabir <nutan.kabir@torrentlaboratory.com>
To Natalie Serda

If there are problems with how this message is displayed, click here to view it in a web browser.

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe

Hi Natalie,

I just heard from the lab that the earliest the Service person could come to fix the instrument is by Friday.
So basically all the samples we received on Friday 3/4 will be analyzed out of hold time.
Your SDG 2202601, 2202850, 2203057.

Thanks,
Nutan

On Tue, Mar 8, 2022 at 11:45 AM Natalie Serda <Natalie.Serda@pacelabs.com> wrote:

> Hi Nutan,
>
> I am not showing 2203005 as a correct SDG, can you please confirm our number?
>
> Thanks,
>
> Natalie Serda

Thanks,

Natalie Serda
Project Manager II
4100 Atlas Ct. Bakersfield, CA 93308
O: 661.327.4911 | M: 661.912.4694 | pacelabs.com

For Courier Scheduling, please contact Mike Graham 661.201.4158 – michael.graham@pacelabs.com (Please note a Min. of 24 Hr. Notice is required to ensure we can accommodate all requests)

NEW: PROCESS PAYMENTS ONLINE – click on the link below
Online Bill Pay

2

A 2.5% surcharge may be added to your payment should you choose to use a credit card for payment. Debit and ACH/e-checks incur no additional fee.

3

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-01 | **Client Sample Name:** NASA/JPL, TB-6-020722, 2/7/2022 8:00:00AM

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

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-01 | **Client Sample Name:** NASA/JPL, TB-6-020722, 2/7/2022 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	**0.46**	**ug/L**	**0.50**	**0.21**	**EPA-524.2**	ND	**J**	1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-01 | **Client Sample Name:** NASA/JPL, TB-6-020722, 2/7/2022 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 14:13	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202601-01 | **Client Sample Name:** NASA/JPL, TB-6-020722, 2/7/2022 8:00:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 14:13	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-02 | **Client Sample Name:** NASA/JPL, MW-4-3, 2/7/2022 9:00:00AM

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

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-02 | **Client Sample Name:** NASA/JPL, MW-4-3, 2/7/2022 9:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	**0.47**	**ug/L**	**0.50**	**0.21**	**EPA-524.2**	ND	**J**	1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.19**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-02 | **Client Sample Name:** NASA/JPL, MW-4-3, 2/7/2022 9:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 11:46	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202601-02 | **Client Sample Name:** NASA/JPL, MW-4-3, 2/7/2022 9:00:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 11:46	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202601-02 | **Client Sample Name:** NASA/JPL, MW-4-3, 2/7/2022 9:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000044**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	**0.76**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 16:47	MKB	IC-4	1	B131424	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 10:44	KHS	PE-EL4	1	B131714	EPA 200.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-03 | **Client Sample Name:** NASA/JPL, MW-4-2, 2/7/2022 10:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.74**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND	V11	1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-03 | **Client Sample Name:** NASA/JPL, MW-4-2, 2/7/2022 10:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.35**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-03 | **Client Sample Name:** NASA/JPL, MW-4-2, 2/7/2022 10:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 14:37	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202601-03 | **Client Sample Name:** NASA/JPL, MW-4-2, 2/7/2022 10:00:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 14:37	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202601-03 | **Client Sample Name:** NASA/JPL, MW-4-2, 2/7/2022 10:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0016**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	**1.9**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 17:26	MKB	IC-4	1	B131424	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 11:10	KHS	PE-EL4	1	B131714	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-04 | **Client Sample Name:** NASA/JPL, MW-4-1, 2/7/2022 10:30:00AM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-04 | **Client Sample Name:** NASA/JPL, MW-4-1, 2/7/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-04 | **Client Sample Name:** NASA/JPL, MW-4-1, 2/7/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 15:02	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202601-04 | **Client Sample Name:** NASA/JPL, MW-4-1, 2/7/2022 10:30:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 15:02	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202601-04 | **Client Sample Name:** NASA/JPL, MW-4-1, 2/7/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00020**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 17:35	MKB	IC-4	1	B131424	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 11:12	KHS	PE-EL4	1	B131714	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-05 | **Client Sample Name:** NASA/JPL, MW-11-4, 2/7/2022 1:30:00PM

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

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-05 | **Client Sample Name:** NASA/JPL, MW-11-4, 2/7/2022 1:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	**0.16**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.62**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-05 | **Client Sample Name:** NASA/JPL, MW-11-4, 2/7/2022 1:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	96.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 15:26	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202601-05 | **Client Sample Name:** NASA/JPL, MW-11-4, 2/7/2022 1:30:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 15:26	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-06 | **Client Sample Name:** NASA/JPL, MW-11-3, 2/7/2022 2:00:00PM

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

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-06 | **Client Sample Name:** NASA/JPL, MW-11-3, 2/7/2022 2:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.51**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	**0.70**	**ug/L**	**0.50**	**0.48**	**EPA-524.2**	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-06 | **Client Sample Name:** NASA/JPL, MW-11-3, 2/7/2022 2:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 15:51	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202601-06 | **Client Sample Name:** NASA/JPL, MW-11-3, 2/7/2022 2:00:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 15:51	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202601-06 | **Client Sample Name:** NASA/JPL, MW-11-3, 2/7/2022 2:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000074**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	**0.61**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 18:13	MKB	IC-4	1	B131424	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 11:14	KHS	PE-EL4	1	B131714	EPA 200.2

DCN = Data Continuation Number

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Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-07 | **Client Sample Name:** NASA/JPL, MW-11-2, 2/7/2022 2:25:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-07 | **Client Sample Name:** NASA/JPL, MW-11-2, 2/7/2022 2:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-07 | **Client Sample Name:** NASA/JPL, MW-11-2, 2/7/2022 2:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	117	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/10/22 23:35	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202601-07 | **Client Sample Name:** NASA/JPL, MW-11-2, 2/7/2022 2:25:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/10/22 23:35	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202601-07 | **Client Sample Name:** NASA/JPL, MW-11-2, 2/7/2022 2:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000081**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 18:52	MKB	IC-4	1	B131425	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 13:59	KHS	PE-EL2	1	B131715	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-08 | **Client Sample Name:** NASA/JPL, SB-2-020722, 2/7/2022 2:45:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-08 | **Client Sample Name:** NASA/JPL, SB-2-020722, 2/7/2022 2:45:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-08 | **Client Sample Name:** NASA/JPL, SB-2-020722, 2/7/2022 2:45:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 16:15	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202601-08 | **Client Sample Name:** NASA/JPL, SB-2-020722, 2/7/2022 2:45:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 16:15	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202601-08 | **Client Sample Name:** NASA/JPL, SB-2-020722, 2/7/2022 2:45:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000065**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 20:14	JAT	IC-4	1	B131425	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 11:16	KHS	PE-EL4	1	B131714	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-09 | **Client Sample Name:** NASA/JPL, EB-6-020722, 2/7/2022 2:55:00PM

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

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-09 | **Client Sample Name:** NASA/JPL, EB-6-020722, 2/7/2022 2:55:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-09 | **Client Sample Name:** NASA/JPL, EB-6-020722, 2/7/2022 2:55:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 16:40	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202601-09 | **Client Sample Name:** NASA/JPL, EB-6-020722, 2/7/2022 2:55:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 16:40	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202601-09 | **Client Sample Name:** NASA/JPL, EB-6-020722, 2/7/2022 2:55:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000063**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 20:23	JAT	IC-4	1	B131425	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 11:17	KHS	PE-EL4	1	B131714	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-10 | **Client Sample Name:** NASA/JPL, MW-11-1, 2/7/2022 3:00:00PM

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

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-10 | **Client Sample Name:** NASA/JPL, MW-11-1, 2/7/2022 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202601-10 | **Client Sample Name:** NASA/JPL, MW-11-1, 2/7/2022 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 17:04	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202601-10 | **Client Sample Name:** NASA/JPL, MW-11-1, 2/7/2022 3:00:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 06:00	02/10/22 17:04	MGC	MS-V5	1	B131502	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 2202601-10 | **Client Sample Name:** NASA/JPL, MW-11-1, 2/7/2022 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Chloride	**22**	**mg/L**	**0.50**	**0.13**	**EPA-300.0**	0.16		1
Nitrate as N	**0.47**	**mg/L**	**0.10**	**0.024**	**EPA-300.0**	ND		1
Sulfate	**49**	**mg/L**	**1.0**	**0.14**	**EPA-300.0**	ND		1
Nitrite as N	**0.011**	**mg/L**	**0.050**	**0.010**	**EPA-353.2**	ND	**J**	2
ortho-Phosphate as P	**0.033**	**mg/L**	**0.050**	**0.017**	**EPA-365.1**	ND	**J**	3

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-300.0	02/07/22 21:00	02/08/22 03:29	SAV	IC2	1	B131288	No Prep
2	EPA-353.2	02/08/22 08:02	02/08/22 08:02	MC1	KONE-1	1	B131439	No Prep
3	EPA-365.1	02/08/22 20:29	02/08/22 20:38	KB1	SC-2	1	B131506	No Prep

DCN = Data Continuation Number

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202601-10 | **Client Sample Name:** NASA/JPL, MW-11-1, 2/7/2022 3:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00010**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/08/22 23:00	02/09/22 19:30	MKB	IC-4	1	B131425	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 11:19	KHS	PE-EL4	1	B131714	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131502						
Benzene	B131502-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B131502-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B131502-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B131502-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B131502-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B131502-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B131502-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B131502-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B131502-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B131502-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B131502-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B131502-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B131502-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B131502-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B131502-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B131502-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B131502-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B131502-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B131502-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B131502-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B131502-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B131502-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B131502-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B131502-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B131502-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B131502-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B131502-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B131502-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B131502-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B131502-BLK1	ND	ug/L	0.50	0.14	

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Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131502						
trans-1,3-Dichloropropene	B131502-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B131502-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B131502-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B131502-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B131502-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B131502-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B131502-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B131502-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B131502-BLK1	ND	ug/L	0.50	0.12	
Styrene	B131502-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B131502-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B131502-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B131502-BLK1	ND	ug/L	0.50	0.23	
Toluene	B131502-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B131502-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B131502-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B131502-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B131502-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B131502-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B131502-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B131502-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B131502-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B131502-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B131502-BLK1	ND	ug/L	0.50	0.18	
Acetone	B131502-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B131502-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B131502-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B131502-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B131502-BLK1	ND	ug/L	2.0	2.0	
Carbon disulfide	B131502-BLK1	ND	ug/L	0.50	0.48	
trans-1,4-Dichloro-2-butene	B131502-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B131502-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B131502-BLK1	ND	ug/L	4.0	1.3	

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Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B131502						
Ethyl t-butyl ether	B131502-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B131502-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B131502-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B131502-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B131502-BLK1	ND	ug/L	5.0	3.3	
Methyl iodide	B131502-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B131502-BLK1	ND	ug/L	5.0	2.4	
Methyl methacrylate	B131502-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B131502-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B131502-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B131502-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B131502-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B131502-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	**B131502-BLK1**	**112**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B131502-BLK1**	**98.4**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B131502-BLK1**	**95.0**	%	**80 - 120 (LCL - UCL)**		
QC Batch ID: B131503						
Benzene	B131503-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B131503-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B131503-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B131503-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B131503-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B131503-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B131503-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B131503-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B131503-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B131503-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B131503-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B131503-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B131503-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B131503-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B131503-BLK1	ND	ug/L	0.50	0.093	

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Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B131503						
Dibromochloromethane	B131503-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B131503-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B131503-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B131503-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B131503-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B131503-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B131503-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B131503-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B131503-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B131503-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B131503-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B131503-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B131503-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B131503-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B131503-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	B131503-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B131503-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B131503-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B131503-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B131503-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B131503-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B131503-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B131503-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B131503-BLK1	ND	ug/L	0.50	0.12	
Styrene	B131503-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B131503-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B131503-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B131503-BLK1	ND	ug/L	0.50	0.23	
Toluene	B131503-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.15	

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Reported: 03/24/2022 11:48
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Project Number: 1Q22
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: B131503						
1,1,1-Trichloroethane	B131503-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B131503-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B131503-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B131503-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B131503-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B131503-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B131503-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B131503-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B131503-BLK1	ND	ug/L	0.50	0.18	
Acetone	B131503-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B131503-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B131503-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B131503-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B131503-BLK1	ND	ug/L	2.0	2.0	
Carbon disulfide	B131503-BLK1	ND	ug/L	0.50	0.48	
trans-1,4-Dichloro-2-butene	B131503-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B131503-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B131503-BLK1	ND	ug/L	4.0	1.3	
Ethyl t-butyl ether	B131503-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B131503-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B131503-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B131503-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B131503-BLK1	ND	ug/L	5.0	3.3	
Methyl iodide	B131503-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B131503-BLK1	ND	ug/L	5.0	2.4	
Methyl methacrylate	B131503-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B131503-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B131503-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B131503-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B131503-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B131503-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	**B131503-BLK1**	**114**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B131503-BLK1**	**97.9**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B131503-BLK1**	**96.7**	%	**80 - 120 (LCL - UCL)**		

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Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131502										
Benzene	B131502-BS1	LCS	22.970	25.000	ug/L	91.9		70 - 130		
Bromodichloromethane	B131502-BS1	LCS	24.700	25.000	ug/L	98.8		70 - 130		
Chlorobenzene	B131502-BS1	LCS	22.870	25.000	ug/L	91.5		70 - 130		
Chloroethane	B131502-BS1	LCS	22.140	25.000	ug/L	88.6		70 - 130		
1,4-Dichlorobenzene	B131502-BS1	LCS	23.720	25.000	ug/L	94.9		70 - 130		
1,1-Dichloroethane	B131502-BS1	LCS	23.320	25.000	ug/L	93.3		70 - 130		
1,1-Dichloroethene	B131502-BS1	LCS	25.280	25.000	ug/L	101		70 - 130		
Toluene	B131502-BS1	LCS	22.890	25.000	ug/L	91.6		70 - 130		
Trichloroethene	B131502-BS1	LCS	23.650	25.000	ug/L	94.6		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B131502-BS1	LCS	10.760	10.000	ug/L	108		75 - 125		
Toluene-d8 (Surrogate)	B131502-BS1	LCS	9.9300	10.000	ug/L	99.3		80 - 120		
4-Bromofluorobenzene (Surrogate)	B131502-BS1	LCS	10.510	10.000	ug/L	105		80 - 120		
QC Batch ID: B131503										
Benzene	B131503-BS1	LCS	23.730	25.000	ug/L	94.9		70 - 130		
Bromodichloromethane	B131503-BS1	LCS	25.460	25.000	ug/L	102		70 - 130		
Chlorobenzene	B131503-BS1	LCS	23.010	25.000	ug/L	92.0		70 - 130		
Chloroethane	B131503-BS1	LCS	24.190	25.000	ug/L	96.8		70 - 130		
1,4-Dichlorobenzene	B131503-BS1	LCS	24.460	25.000	ug/L	97.8		70 - 130		
1,1-Dichloroethane	B131503-BS1	LCS	24.610	25.000	ug/L	98.4		70 - 130		
1,1-Dichloroethene	B131503-BS1	LCS	26.000	25.000	ug/L	104		70 - 130		
Toluene	B131503-BS1	LCS	23.590	25.000	ug/L	94.4		70 - 130		
Trichloroethene	B131503-BS1	LCS	25.900	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B131503-BS1	LCS	11.330	10.000	ug/L	113		75 - 125		
Toluene-d8 (Surrogate)	B131503-BS1	LCS	10.010	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	B131503-BS1	LCS	10.530	10.000	ug/L	105		80 - 120		

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131502	Used client sample: Y - Description: MW-4-3, 02/07/2022 09:00										
Benzene	MS	2202601-02	ND	23.880	25.000	ug/L		95.5		70 - 130	
	MSD	2202601-02	ND	23.590	25.000	ug/L	1.2	94.4	20	70 - 130	
Bromodichloromethane	MS	2202601-02	ND	26.090	25.000	ug/L		104		70 - 130	
	MSD	2202601-02	ND	24.420	25.000	ug/L	6.6	97.7	20	70 - 130	
Chlorobenzene	MS	2202601-02	ND	23.660	25.000	ug/L		94.6		70 - 130	
	MSD	2202601-02	ND	23.240	25.000	ug/L	1.8	93.0	20	70 - 130	
Chloroethane	MS	2202601-02	ND	22.590	25.000	ug/L		90.4		70 - 130	
	MSD	2202601-02	ND	21.850	25.000	ug/L	3.3	87.4	20	70 - 130	
1,4-Dichlorobenzene	MS	2202601-02	ND	24.340	25.000	ug/L		97.4		70 - 130	
	MSD	2202601-02	ND	24.010	25.000	ug/L	1.4	96.0	20	70 - 130	
1,1-Dichloroethane	MS	2202601-02	ND	24.580	25.000	ug/L		98.3		70 - 130	
	MSD	2202601-02	ND	24.280	25.000	ug/L	1.2	97.1	20	70 - 130	
1,1-Dichloroethene	MS	2202601-02	ND	26.420	25.000	ug/L		106		70 - 130	
	MSD	2202601-02	ND	25.690	25.000	ug/L	2.8	103	20	70 - 130	
Toluene	MS	2202601-02	ND	24.370	25.000	ug/L		97.5		70 - 130	
	MSD	2202601-02	ND	23.710	25.000	ug/L	2.7	94.8	20	70 - 130	
Trichloroethene	MS	2202601-02	0.19000	25.150	25.000	ug/L		99.8		70 - 130	
	MSD	2202601-02	0.19000	24.470	25.000	ug/L	2.7	97.1	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2202601-02	ND	10.710	10.000	ug/L		107		75 - 125	
	MSD	2202601-02	ND	10.300	10.000	ug/L	3.9	103		75 - 125	
Toluene-d8 (Surrogate)	MS	2202601-02	ND	10.010	10.000	ug/L		100		80 - 120	
	MSD	2202601-02	ND	9.8100	10.000	ug/L	2.0	98.1		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	2202601-02	ND	10.210	10.000	ug/L		102		80 - 120	
	MSD	2202601-02	ND	10.230	10.000	ug/L	0.2	102		80 - 120	
QC Batch ID: B131503	Used client sample: Y - Description: MW-11-2, 02/07/2022 14:25										
Benzene	MS	2202601-07	ND	24.390	25.000	ug/L		97.6		70 - 130	
	MSD	2202601-07	ND	24.450	25.000	ug/L	0.2	97.8	20	70 - 130	
Bromodichloromethane	MS	2202601-07	ND	26.640	25.000	ug/L		107		70 - 130	
	MSD	2202601-07	ND	25.730	25.000	ug/L	3.5	103	20	70 - 130	
Chlorobenzene	MS	2202601-07	ND	23.290	25.000	ug/L		93.2		70 - 130	
	MSD	2202601-07	ND	23.050	25.000	ug/L	1.0	92.2	20	70 - 130	
Chloroethane	MS	2202601-07	ND	24.850	25.000	ug/L		99.4		70 - 130	
	MSD	2202601-07	ND	24.480	25.000	ug/L	1.5	97.9	20	70 - 130	
1,4-Dichlorobenzene	MS	2202601-07	ND	24.300	25.000	ug/L		97.2		70 - 130	
	MSD	2202601-07	ND	23.850	25.000	ug/L	1.9	95.4	20	70 - 130	
1,1-Dichloroethane	MS	2202601-07	ND	25.820	25.000	ug/L		103		70 - 130	
	MSD	2202601-07	ND	25.320	25.000	ug/L	2.0	101	20	70 - 130	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131503	Used client sample: Y - Description: MW-11-2, 02/07/2022 14:25										
1,1-Dichloroethene	MS	2202601-07	ND	27.150	25.000	ug/L		109		70 - 130	
	MSD	2202601-07	ND	26.760	25.000	ug/L	1.4	107	20	70 - 130	
Toluene	MS	2202601-07	ND	24.120	25.000	ug/L		96.5		70 - 130	
	MSD	2202601-07	ND	23.910	25.000	ug/L	0.9	95.6	20	70 - 130	
Trichloroethene	MS	2202601-07	ND	24.670	25.000	ug/L		98.7		70 - 130	
	MSD	2202601-07	ND	24.440	25.000	ug/L	0.9	97.8	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2202601-07	ND	11.150	10.000	ug/L		112		75 - 125	
	MSD	2202601-07	ND	11.020	10.000	ug/L	1.2	110		75 - 125	
Toluene-d8 (Surrogate)	MS	2202601-07	ND	9.9200	10.000	ug/L		99.2		80 - 120	
	MSD	2202601-07	ND	9.8700	10.000	ug/L	0.5	98.7		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	2202601-07	ND	10.150	10.000	ug/L		102		80 - 120	
	MSD	2202601-07	ND	10.200	10.000	ug/L	0.5	102		80 - 120	

Tidewater Inc. - Powell
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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131502						
Chloroacetonitrile	B131502-BLK1	0	ug/L			
1-Chlorobutane	B131502-BLK1	0	ug/L			
1,1-Dichloropropanone	B131502-BLK1	0	ug/L			
Methyl acrylate	B131502-BLK1	0	ug/L			
Nitrobenzene	B131502-BLK1	0	ug/L			
2-Nitropropane	B131502-BLK1	0	ug/L			
QC Batch ID: B131503						
Chloroacetonitrile	B131503-BLK1	0	ug/L			
1-Chlorobutane	B131503-BLK1	0	ug/L			
1,1-Dichloropropanone	B131503-BLK1	0	ug/L			
Methyl acrylate	B131503-BLK1	0	ug/L			
Nitrobenzene	B131503-BLK1	0	ug/L			
2-Nitropropane	B131503-BLK1	0	ug/L			

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131288						
Chloride	**B131288-BLK1**	**0.16500**	**mg/L**	**0.50**	**0.13**	**J**
Nitrate as N	B131288-BLK1	ND	mg/L	0.10	0.024	
Sulfate	B131288-BLK1	ND	mg/L	1.0	0.14	
QC Batch ID: B131439						
Nitrite as N	B131439-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: B131506						
ortho-Phosphate as P	B131506-BLK1	ND	mg/L	0.050	0.017	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131288										
Chloride	B131288-BS1	LCS	49.965	50.000	mg/L	99.9		90 - 110		
	B131288-BSD1	LCSD	50.084	50.000	mg/L	100	0.2	90 - 110	10	
Nitrate as N	B131288-BS1	LCS	5.0240	5.0000	mg/L	100		90 - 110		
	B131288-BSD1	LCSD	5.0890	5.0000	mg/L	102	1.3	90 - 110	10	
Sulfate	B131288-BS1	LCS	98.961	100.00	mg/L	99.0		90 - 110		
	B131288-BSD1	LCSD	99.194	100.00	mg/L	99.2	0.2	90 - 110	10	
QC Batch ID: B131439										
Nitrite as N	B131439-BS1	LCS	0.51870	0.50000	mg/L	104		90 - 110		
QC Batch ID: B131506										
ortho-Phosphate as P	B131506-BS1	LCS	0.50760	0.50000	mg/L	102		90 - 110		

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131288	Used client sample: N										
Chloride	DUP	2202600-02	22.541	22.596		mg/L	0.2		10		
	MS	2202600-02	22.541	79.434	50.505	mg/L		113		80 - 120	
	MSD	2202600-02	22.541	79.412	50.505	mg/L	0.0	113	10	80 - 120	
Nitrate as N	DUP	2202600-02	0.14000	0.13300		mg/L	5.1		10		
	MS	2202600-02	0.14000	5.2737	5.0505	mg/L		102		80 - 120	
	MSD	2202600-02	0.14000	5.3354	5.0505	mg/L	1.2	103	10	80 - 120	
Sulfate	DUP	2202600-02	16.711	16.566		mg/L	0.9		10		
	MS	2202600-02	16.711	124.56	101.01	mg/L		107		80 - 120	
	MSD	2202600-02	16.711	124.99	101.01	mg/L	0.3	107	10	80 - 120	
QC Batch ID: B131439	Used client sample: N										
Nitrite as N	DUP	2202589-01	ND	ND		mg/L			10		
	MS	2202589-01	ND	0.54775	0.52632	mg/L		104		90 - 110	
	MSD	2202589-01	ND	0.55815	0.52632	mg/L	1.9	106	10	90 - 110	
QC Batch ID: B131506	Used client sample: Y - Description: MW-11-1, 02/07/2022 15:00										
ortho-Phosphate as P	DUP	2202601-10	0.033300	0.034600		mg/L	3.8		10		J
	MS	2202601-10	0.033300	0.57653	0.52632	mg/L		103		90 - 110	
	MSD	2202601-10	0.033300	0.57074	0.52632	mg/L	1.0	102	10	90 - 110	

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131424						
Hexavalent Chromium	B131424-BLK1	ND	mg/L	0.00020	0.000020	
QC Batch ID: B131425						
Hexavalent Chromium	B131425-BLK1	ND	mg/L	0.00020	0.000020	
QC Batch ID: B131714						
Total Recoverable Chromium	B131714-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B131715						
Total Recoverable Chromium	B131715-BLK1	ND	ug/L	3.0	0.50	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131424										
Hexavalent Chromium	B131424-BS1	LCS	0.020312	0.020000	mg/L	102		90 - 110		
QC Batch ID: B131425										
Hexavalent Chromium	B131425-BS1	LCS	0.020684	0.020000	mg/L	103		90 - 110		
QC Batch ID: B131714										
Total Recoverable Chromium	B131714-BS1	LCS	40.430	40.000	ug/L	101		85 - 115		
QC Batch ID: B131715										
Total Recoverable Chromium	B131715-BS1	LCS	42.450	40.000	ug/L	106		85 - 115		

Pace Analytical
ENVIRONMENTAL SCIENCES

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Reported: 03/24/2022 11:48
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131424	Used client sample: Y - Description: MW-4-3, 02/07/2022 09:00										
Hexavalent Chromium	DUP	**2202601-02**	**0.000044000**	**0.000052000**		**mg/L**	**16.7**		**10**		**J,A02**
	MS	**2202601-02**	**0.000044000**	**0.020556**	**0.020202**	**mg/L**		**102**		**90 - 110**	
	MSD	**2202601-02**	**0.000044000**	**0.019655**	**0.020202**	**mg/L**	**4.5**	**97.1**	**10**	**90 - 110**	
QC Batch ID: B131425	Used client sample: Y - Description: MW-11-2, 02/07/2022 14:25										
Hexavalent Chromium	DUP	**2202601-07**	**0.000081000**	**0.000073000**		**mg/L**	**10.4**		**10**		**J,A02**
	MS	**2202601-07**	**0.000081000**	**0.019852**	**0.020202**	**mg/L**		**97.9**		**90 - 110**	
	MSD	**2202601-07**	**0.000081000**	**0.019779**	**0.020202**	**mg/L**	**0.4**	**97.5**	**10**	**90 - 110**	
QC Batch ID: B131714	Used client sample: Y - Description: MW-4-3, 02/07/2022 09:00										
Total Recoverable Chromium	DUP	2202601-02	0.75900	ND		ug/L			20		
	MS	2202601-02	0.75900	39.095	40.000	ug/L		95.8		70 - 130	
	MSD	2202601-02	0.75900	40.571	40.000	ug/L	3.7	99.5	20	70 - 130	
QC Batch ID: B131715	Used client sample: Y - Description: MW-11-2, 02/07/2022 14:25										
Total Recoverable Chromium	DUP	2202601-07	ND	ND		ug/L			20		
	MS	2202601-07	ND	42.357	40.000	ug/L		106		70 - 130	
	MSD	2202601-07	ND	38.857	40.000	ug/L	8.6	97.1	20	70 - 130	

Torrent LABORATORY, INC.

ANALYTICAL SUMMARY DATA PACKAGE

Level II

SDG # DoD2203005

Project Name: JPL/2202601

Project Location:

SUBMITTAL TO:

Natalie Serda
Pace Analytical Services,Inc
940 S Harney Street
Seattle, Washington 98108

SUBMITTAL BY:

Torrent Laboratory, Inc.
483 Sinclair Frontage Road
Milpitas, CA 95035
Tel (408)263-5258
Fax (408)263-8293

LABORATORY CONTACT PERSON:

Project Manager: KEVANS
Tel (408) 263-5258
Fax (408) 263-2708
Email: pm@torrentlaboratory.com
Original Report Date: 3/18/2022
Report Revision:
Revision Date:

Total Pages: 16

THIS DOCUMENT MEETS DoD QSM 5.3 STANDARDS

The results relate to only the samples associated with the referenced SDG. The submitted data has been produced in accordance with laboratory procedures. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Torrent Laboratory, Inc

Kathie Evans
Project Manager

March 18, 2022
Date

Page 1 of 16

Torrent LABORATORY, INC.

TABLE OF CONTENTS

Torrent LABORATORY, INC.

CASE NARRATIVE

No issues were encountered with receiving, preparation, analysis or reporting of the results associated with this work order.

Analytical Comments for method 314.0
Samples were analyzed past the method recommended holding time of 28 days with client approval.

LAB QUALIFIERS

U - Analyte was not detected and is reported as less than the MDL or as defined by the customer. The MDL has been adjusted for any dilution or concentration of the sample.

J - The reported result is an estimated value (the sample concentration is between the established MDL and the client specified PQL).

B - Blank contamination. The recorded result is associated with a blank with a detected value at greater than 1/2 the PQL.

D - Sample/surrogate spike concentration not reportable due to required dilution of the sample.

E - The reported result is an estimated result. The reported result was outside of the calibration range of the instrument but within linear range.

NR - Not Recoverable. The sample concentration is greater than four times the spike concentration.

Q or S - One or more quality control criteria failed (e.g., LCS recovery, surrogate spike)

Torrent LABORATORY, INC.

Sample Receipt Checklist

Client Name: Pace Analytical Services,Inc
Project Name: JPL
Work Order No.: DoD2203005

Date and Time Received: 3/4/2022
Received By: Emily Ragudo
Physically Logged By: Helena Ueng
Checklist Completed By: Helena Ueng
Carrier Name: GLS

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Applicable

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Applicable
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes			
Container/Temp Blank temperature in compliance?	Yes	Temperature:	3.0	°C
Water-VOA vials have zero headspace?	N/A			
Water-pH acceptable upon receipt?	N/A			

pH Checked by: N/A pH Adjusted by: N/A

Comments:

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Torrent LABORATORY, INC.

Login Summary Report

Client ID: TL5198 Pace Analytical Services,Inc
Project Name: JPL
Project # : 2202601
Report Due Date: 3/18/2022
Comments:
Work Order # : DoD2203005

TAT Requested: 10 Day:10
Date Received: 3/4/2022
Time Received: 9:37 am

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
DoD2203005-001A	MW-4-3	02/07/22 9:00	Water	03/24/22			DoD_314.0_W	
Sample Note:	Level 4 report (Not a DoD project, but needs DoD report format) *Use both samples DoD2203005-001 & DoD2203005-006 for MS/MSD. **Samples expire 3/7/22!!							
DoD2203005-002A	MW-4-2	02/07/22 10:00	Water	03/24/22			DoD_314.0_W	
DoD2203005-003A	MW-4-1	02/07/22 10:30	Water	03/24/22			DoD_314.0_W	
DoD2203005-004A	MW-11-4	02/07/22 13:30	Water	03/24/22			DoD_314.0_W	
DoD2203005-005A	MW-11-3	02/07/22 14:00	Water	03/24/22			DoD_314.0_W	
DoD2203005-006A	MW-11-2	02/07/22 14:25	Water	03/24/22			DoD_314.0_W	
Sample Note:	-001/-006: RUN MS/MSD							
DoD2203005-007A	SB-2-020722	02/07/22 14:45	Water	03/24/22			DoD_314.0_W	
DoD2203005-008A	EB-6-020722	02/07/22 14:55	Water	03/24/22			DoD_314.0_W	
DoD2203005-009A	MW-11-1	02/07/22 15:00	Water	03/24/22			DoD_314.0_W	

Torrent LABORATORY, INC.

Chain of Custody

SUBCONTRACT ORDER

BC Laboratories

2202601

DID2203005

SENDING LABORATORY:

BC Laboratories
4100 Atlas Ct
Bakersfield, CA 93308
Phone: 661-327-4911
Fax: 661-327-1918
Project Manager: Natalie Serda

RECEIVING LABORATORY:

Torrent Laboratory STRRTL
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone :(408) 263-5258
Fax: (000) 000-0000

POD

LEVEL IV

Analysis	Due	Expires	Laboratory ID	Comments
-001A **Sample ID: 2202601-02**	**Water**	**Sampled:02/07/22 09:00**		**MS/MSD Level IV/ MW-4-3**
i314.0w Perchlorate (ug/L)	02/21/22 17:00	03/07/22 09:00		Global ID #0000000000 /BTST
Containers Supplied: 2x PE				
-002A **Sample ID: 2202601-03**	**Water**	**Sampled:02/07/22 10:00**		**Level III/ MW-4-2**
i314.0w Perchlorate (ug/L)	02/21/22 17:00	03/07/22 10:00		
Containers Supplied:				
-003A **Sample ID: 2202601-04**	**Water**	**Sampled:02/07/22 10:30**		**Level III/ MW-4-1**
i314.0w Perchlorate (ug/L)	02/21/22 17:00	03/07/22 10:30		
Containers Supplied:				
-004A **Sample ID: 2202601-05**	**Water**	**Sampled:02/07/22 13:30**		**Level III/ MW-11-4**
i314.0w Perchlorate (ug/L)	02/21/22 17:00	03/07/22 13:30		
Containers Supplied:				
-005A **Sample ID: 2202601-06**	**Water**	**Sampled:02/07/22 14:00**		**Level III/ MW-11-3**
i314.0w Perchlorate (ug/L)	02/21/22 17:00	03/07/22 14:00		
Containers Supplied:				

Released By	Date	Received By	Date
	3-3-22		
Released By	Date	Received By	Date
	3-4-22 / 9:37		3/4/22 9:37

GLS - Temp=3°C #3

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Torrent LABORATORY, INC.

SUBCONTRACT ORDER

BC Laboratories

2202601

DOD2203005

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 2202601-07	**Water**	**Sampled:02/07/22 14:25**		**MS/MSD Level IV/ MW-11-2**
i314.0w Perchlorate (ug/L)	02/21/22 17:00	03/07/22 14:25		
Containers Supplied:				
Sample ID: 2202601-08	**Water**	**Sampled:02/07/22 14:45**		**Level III/ SB-2-020722**
i314.0w Perchlorate (ug/L)	02/21/22 17:00	03/07/22 14:45		
Containers Supplied:				
Sample ID: 2202601-09	**Water**	**Sampled:02/07/22 14:55**		**Level III/ EB-6-020722**
i314.0w Perchlorate (ug/L)	02/21/22 17:00	03/07/22 14:55		
Containers Supplied:				
Sample ID: 2202601-10	**Water**	**Sampled:02/07/22 15:00**		**Level III/ MW-11-1**
i314.0w Perchlorate (ug/L)	02/21/22 17:00	03/07/22 15:00		
Containers Supplied:				

LEVEL IV

Released By	Date	Received By	Date
	2-3-22		
Released By	Date	Received By	Date

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Torrent LABORATORY, INC.

SAMPLE RESULTS DATA

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/04/22, 9:37 am
Date Reported: 03/18/22

Client Sample ID: MW-4-3
Project Name/Location: JPL
Project Number: 2202601
Date/Time Sampled: 02/07/22 / 9:00
SDG: SDGDoD2203005
Tag Number: 2202601-02

Lab Sample ID: DoD2203005-001A
Sample Matrix: Groundwater

Prep Method: 314.0WP
Prep Batch ID: 1140041

Prep Batch Date/Time: 3/9/22 5:30:00PM
Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/09/22	21:06	PH	464422

Client Sample ID: MW-4-2
Project Name/Location: JPL
Project Number: 2202601
Date/Time Sampled: 02/07/22 / 10:00
SDG: SDGDoD2203005
Tag Number: 2202601-03

Lab Sample ID: DoD2203005-002A
Sample Matrix: Groundwater

Prep Method: 314.0WP
Prep Batch ID: 1140041

Prep Batch Date/Time: 3/9/22 5:30:00PM
Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**49.9**		ug/L	03/09/22	22:12	PH	464422

Client Sample ID: MW-4-1
Project Name/Location: JPL
Project Number: 2202601
Date/Time Sampled: 02/07/22 / 10:30
SDG: SDGDoD2203005
Tag Number: 2202601-04

Lab Sample ID: DoD2203005-003A
Sample Matrix: Groundwater

Prep Method: 314.0WP
Prep Batch ID: 1140041

Prep Batch Date/Time: 3/9/22 5:30:00PM
Prep Analyst: PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/09/22	22:34	PH	464422

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/04/22, 9:37 am
Date Reported: 03/18/22

Client Sample ID:	MW-11-4	**Lab Sample ID:**	DoD2203005-004A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202601		
Date/Time Sampled:	02/07/22 / 13:30		
SDG:	SDGDoD2203005		
Tag Number:	2202601-05		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 5:30:00PM
Prep Batch ID:	1140041	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/09/22	23:40	PH	464422

Client Sample ID:	MW-11-3	**Lab Sample ID:**	DoD2203005-005A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202601		
Date/Time Sampled:	02/07/22 / 14:00		
SDG:	SDGDoD2203005		
Tag Number:	2202601-06		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 5:30:00PM
Prep Batch ID:	1140041	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/10/22	0:03	PH	464422

Client Sample ID:	MW-11-2	**Lab Sample ID:**	DoD2203005-006A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202601		
Date/Time Sampled:	02/07/22 / 14:25		
SDG:	SDGDoD2203005		
Tag Number:	2202601-07		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 5:30:00PM
Prep Batch ID:	1140041	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/10/22	0:25	PH	464422

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/04/22, 9:37 am
Date Reported: 03/18/22

Client Sample ID:	SB-2-020722	**Lab Sample ID:**	DoD2203005-007A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202601		
Date/Time Sampled:	02/07/22 / 14:45		
SDG:	SDGDoD2203005		
Tag Number:	2202601-08		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 5:30:00PM
Prep Batch ID:	1140041	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/10/22	1:31	PH	464422

Client Sample ID:	EB-6-020722	**Lab Sample ID:**	DoD2203005-008A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202601		
Date/Time Sampled:	02/07/22 / 14:55		
SDG:	SDGDoD2203005		
Tag Number:	2202601-09		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 5:30:00PM
Prep Batch ID:	1140041	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/10/22	2:15	PH	464422

Client Sample ID:	MW-11-1	**Lab Sample ID:**	DoD2203005-009A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202601		
Date/Time Sampled:	02/07/22 / 15:00		
SDG:	SDGDoD2203005		
Tag Number:	2202601-10		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 5:30:00PM
Prep Batch ID:	1140041	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/10/22	1:53	PH	464422

SAMPLE QC DATA

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	DoD2203005	**Prep Method:**	314.0WP	**Prep Date:**	03/09/22	**Prep Batch:**	1140041
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	17:30	**Analytical Batch:**	464422
Units:	ug/L			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	1140041-MB
Analyzed Date:	3/9/2022	**Analyzed Time:**	19:16	**Analyzed By:**	PH		

Parameters	DL	LOD	LOQ	Method Blank Conc.	Lab Qualifier
Perchlorate	0.800	2.00	4.00	2.00	J

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Torrent LABORATORY, INC.

LCS/LCSD Summary Report

		Prep Method:	314.0WP	**Prep Date:**	03/09/22	**Prep Batch:**	1140041
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	17:30	**Analytical Batch:**	464422
Units:	ug/L			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	1140041-LCS
Analyzed Date:	3/9/2022	**Analyzed Time:**	20:00	**Analyzed By:**	PH		

Parameters	Spike Conc.	LCS % Recovery	LCSD % Recovery	% Recovery Limits	LCS/LCSD % RPD	% RPD Limits	Lab Qualifier
Perchlorate	50	99.4	98.9	84 - 119	0.605	15	

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Torrent LABORATORY, INC.

MS/MSD Summary Report

Work Order:	DoD2203005	**Prep Method:**	314.0WP	**Prep Date:**	03/09/22	**Prep Batch:**	1140041
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	17:30	**Analytical Batch:**	464422
Spiked Sample:	DoD2203005-001A			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	DoD2203005-001A-MS-1140041
Units:	ug/L						
Analyzed Date:	3/9/2022	**Analyzed Time:**	21:50	**Analyzed By:**	PH		

Parameters	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	% Recovery Limits	MS/MSD % RPD	% RPD Limits	Lab Qualifier
Perchlorate	2.00	50	98.1	102	84 - 119	0.196	15	

Work Order:	DoD2203005	**Prep Method:**	314.0WP	**Prep Date:**	03/09/22	**Prep Batch:**	1140041
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	17:30	**Analytical Batch:**	464422
Spiked Sample:	DoD2203005-006A			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	DoD2203005-006A-MS-1140041
Units:	ug/L						
Analyzed Date:	3/10/2022	**Analyzed Time:**	1:09	**Analyzed By:**	PH		

Parameters	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	% Recovery Limits	MS/MSD % RPD	% RPD Limits	Lab Qualifier
Perchlorate	2.00	50	96.4	100	84 - 119	0.000	15	

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End of Level II Report for SDG SDGDoD2203005

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell	**Reported:** 03/24/2022 11:48
3761 Attucks Drive	Project: JPL- GW Monitoring Wells-CLP
Powell, OH 43065	Project Number: 1Q22
	Project Manager: David Conner

Notes And Definitions

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

Date of Report: 03/24/2022

David Conner

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Client Project:	1Q22
BCL Project:	JPL- GW Monitoring Wells-CLP
BCL Work Order:	2202850
Invoice ID:	

Enclosed are the results of analyses for samples received by the laboratory on 2/8/2022. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1001286929

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Operations Manager

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

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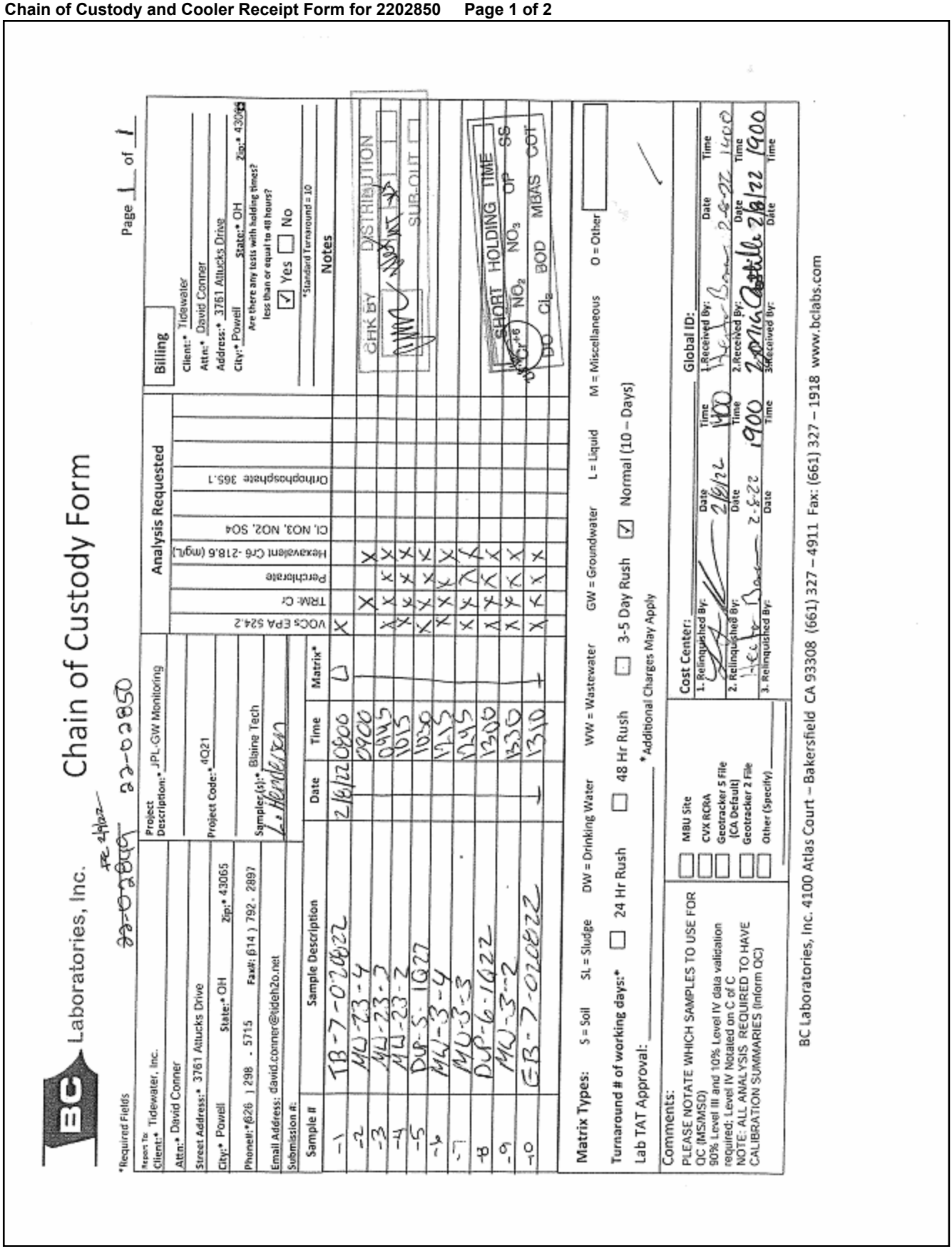
Chain of Custody and Cooler Receipt Form for 2202850 Page 1 of 2



BC Laboratories, Inc. Chain of Custody Form

Page 1 of 1

*Required Fields

Report To: Client: Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:*(626) 298 - 5715 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #: 22-02 2850

Project Description:* JPL-GW Monitoring
Project Code:* 4Q21
Sampler(s):* Blaine Tech

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

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 -218.6 (mg/L)	Cl, NO3, NO2, SO4	Orthophosphate 365.1	Notes
-1	TB-7-020822	2/8/22	0900	L	X						
-2	MW-23-4		0900			X	X	X			CHK BY DISTRIBUTION
-3	MW-23-2		0945		X	X	X	X			
-4	MW-23-3		1015		X	X	X	X			
-5	DUP-5-1Q21		1030		X	X	X	X			SUB-OUT
-6	MW-3-4		1145		X	X	X	X			
-7	MW-3-3		1245		X	X	X	X			
-8	DUP-6-1Q22		1300		X	X	X	X			SHORT HOLDING TIME
-9	MW-3-2		1330		X	X	X	X			NO_2 NO_3 OP SS
-10	EB-7-020822	↓	1310	↓	X	X	X	X			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: _____

1. Relinquished By:	Date	Time	1. Received By:	Date	Time
	2/8/22	1400		2-8-22	1400
2. Relinquished By:	Date	Time	2. Received By:	Date	Time
	2-8-22	1900		2/8/22	1900
3. Relinquished By:	Date	Time	3. Received By:	Date	Time

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

Chain of Custody and Cooler Receipt Form for 2202850 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: ~~22-02849~~ 22-02850

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐	Ice Chest ☑ None ☐ Box ☐	YES ☑ NO ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____	Other ☐ (Specify)_____	(W) / S

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: 0.98 Container: PE Thermometer ID: 274 Date/Time 2/8/22 1100

Temperature: (A) 0.7 °C / (C) 0.4 °C Analyst Init PRE

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / (16oz) PE UNPRES		~~E~~ E	E	E	E	E	E	E	E	E
2oz Cr+6		A	D	D	D	D	D	D	D	D
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz (8oz) 16oz		B	F	F	F	F	F	F	F	F
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL	~~A-C~~ 2/9/22		A-C	A-C	A-C	A-C	A-C	A-C	A-C	A-C
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: FE Date/Time: 2/9/22 1327

A = Actual / C = Corrected

Rev 22 04/13/21

[S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 26]

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202850-01	**COC Number:**	---	**Receive Date:**	02/08/2022 19:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/08/2022 08:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-7-020822	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Trip Blank
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): TB-7-020822			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
2202850-02	**COC Number:**	---	**Receive Date:**	02/08/2022 19:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/08/2022 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-4	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): MW-23-4			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
2202850-03	**COC Number:**	---	**Receive Date:**	02/08/2022 19:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/08/2022 09:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-3	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): MW-23-3			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202850-04	**COC Number:**	---	**Receive Date:**	02/08/2022 19:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/08/2022 10:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-2	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): MW-23-2			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
2202850-05	**COC Number:**	---	**Receive Date:**	02/08/2022 19:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/08/2022 10:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-5-1Q22	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): DUP-5-1Q22			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
2202850-06	**COC Number:**	---	**Receive Date:**	02/08/2022 19:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/08/2022 12:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-4	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): MW-3-4			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2202850-07	**COC Number:**	---	**Receive Date:**	02/08/2022 19:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/08/2022 12:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-3	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-3-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202850-08	**COC Number:**	---	**Receive Date:**	02/08/2022 19:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/08/2022 13:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-6-1Q22	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-6-1Q22	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2202850-09	**COC Number:**	---	**Receive Date:**	02/08/2022 19:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/08/2022 13:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-2	**Lab Matrix:**	Water
	Sampled By:	BTST	**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: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

2202850-10

COC Number: ---
Project Number: NASA/JPL
Sampling Location: ---
Sampling Point: EB-7-020822
Sampled By: BTST

Receive Date: 02/08/2022 19:00
Sampling Date: 02/08/2022 13:10
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Delivery Work Order:
Global ID: 0000000000
Location ID (FieldPoint): EB-7-020822
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

Natalie Serda

From: David Conner <david.conner@tideh2o.net>
Sent: Tuesday, March 8, 2022 1:33 PM
To: Natalie Serda
Subject: RE: [EXTERNAL]Perchlorate 2202601, 2202850, 2203057 (GW's)

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Natalie,

Thanks for letting me know. Yes, please have them report past hold time.

Thank you,

David Conner, PG
Tidewater, Inc.
Cell: 626-298-5715

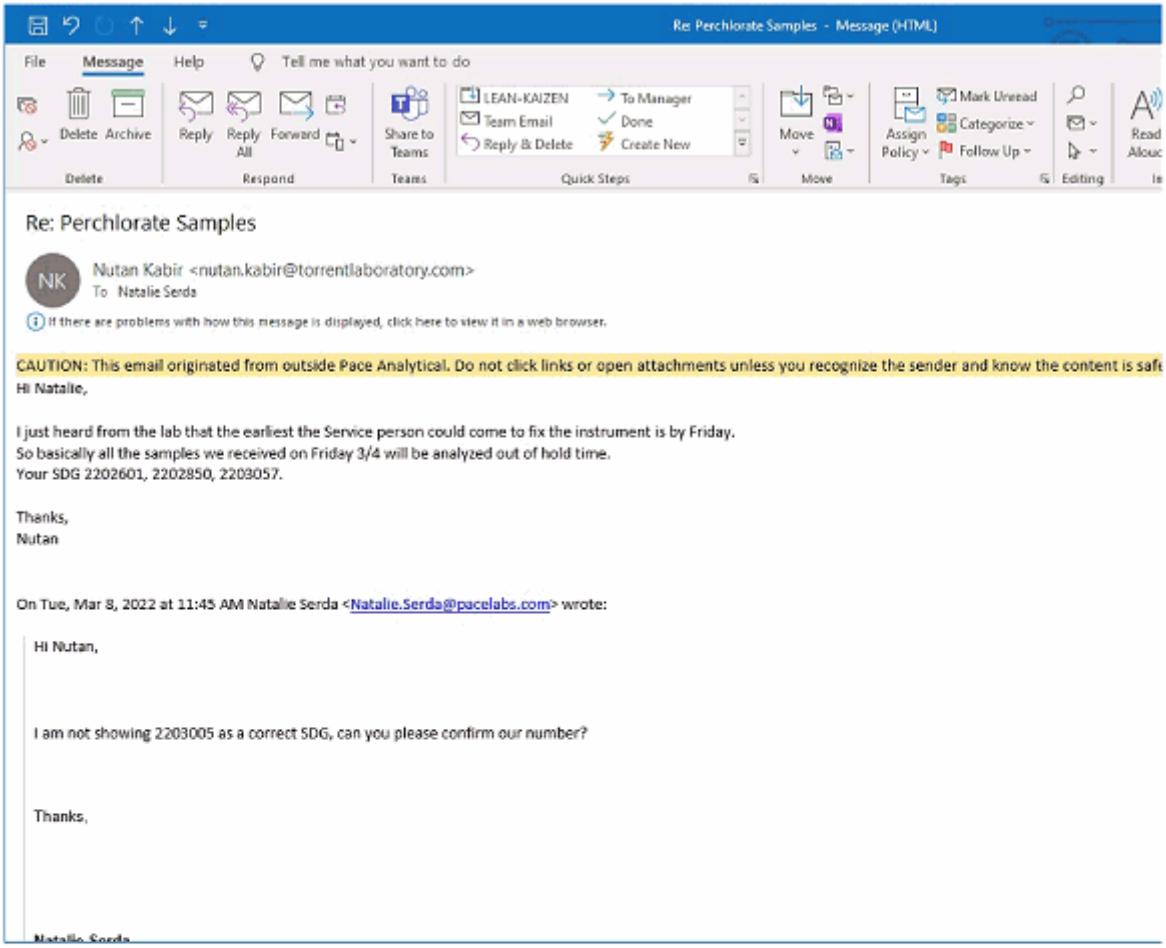
From: Natalie Serda <Natalie.Serda@pacelabs.com>
Sent: Tuesday, March 8, 2022 1:32 PM
To: David Conner <david.conner@tideh2o.net>
Subject: [EXTERNAL]Perchlorate 2202601, 2202850, 2203057 (GW's)
Importance: High

CAUTION: External email, DO NOT click on any links/attachments unless you recognize the sender and know the content is safe

Hi David,

I was advised that the sub lab we sent the perchlorates to for this SDG also just ran into instrument issues and were not able to run within the hold times. Please let me know if you would still like to have them reported past hold.

1



Re: Perchlorate Samples - Message (HTML)

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Re: Perchlorate Samples

NK Nutan Kabir <nutan.kabir@torrentlaboratory.com>
To Natalie Serda

If there are problems with how this message is displayed, click here to view it in a web browser.

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe

Hi Natalie,

I just heard from the lab that the earliest the Service person could come to fix the instrument is by Friday.
So basically all the samples we received on Friday 3/4 will be analyzed out of hold time.
Your SDG 2202601, 2202850, 2203057.

Thanks,
Nutan

On Tue, Mar 8, 2022 at 11:45 AM Natalie Serda <Natalie.Serda@pacelabs.com> wrote:

> Hi Nutan,
>
> I am not showing 2203005 as a correct SDG, can you please confirm our number?
>
> Thanks,
>
> Natalie Serda

Thanks,

Natalie Serda
Project Manager II
4100 Atlas Ct. Bakersfield, CA 93308
O: 661.327.4911 | M: 661.912.4694 | pacelabs.com

For Courier Scheduling, please contact Mike Graham 661.201.4158 – michael.graham@pacelabs.com (Please note a Min. of 24 Hr. Notice is required to ensure we can accommodate all requests)

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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-01 | **Client Sample Name:** NASA/JPL, TB-7-020822, 2/8/2022 8:00:00AM

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

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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-01 | **Client Sample Name:** NASA/JPL, TB-7-020822, 2/8/2022 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	**0.31**	**ug/L**	**0.50**	**0.21**	**EPA-524.2**	ND	**J**	1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-01 | **Client Sample Name:** NASA/JPL, TB-7-020822, 2/8/2022 8:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	117	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/10/22 20:20	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202850-01 | **Client Sample Name:** NASA/JPL, TB-7-020822, 2/8/2022 8:00:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/10/22 20:20	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202850-02 | **Client Sample Name:** NASA/JPL, MW-23-4, 2/8/2022 9:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0041**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000029		1
Total Recoverable Chromium	**3.9**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/14/22 14:00	02/14/22 15:31	MKB	IC-4	1	B131838	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 14:43	KHS	PE-EL2	1	B131715	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-03 | **Client Sample Name:** NASA/JPL, MW-23-3, 2/8/2022 9:45:00AM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-03 | **Client Sample Name:** NASA/JPL, MW-23-3, 2/8/2022 9:45:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-03 | **Client Sample Name:** NASA/JPL, MW-23-3, 2/8/2022 9:45:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/10/22 20:44	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202850-03 | **Client Sample Name:** NASA/JPL, MW-23-3, 2/8/2022 9:45:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/10/22 20:44	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202850-03 | **Client Sample Name:** NASA/JPL, MW-23-3, 2/8/2022 9:45:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0028**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000029		1
Total Recoverable Chromium	**3.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/14/22 14:00	02/14/22 16:09	MKB	IC-4	1	B131838	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 14:45	KHS	PE-EL2	1	B131715	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-04 | **Client Sample Name:** NASA/JPL, MW-23-2, 2/8/2022 10:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.54**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.18**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-04 | **Client Sample Name:** NASA/JPL, MW-23-2, 2/8/2022 10:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.49**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**1.0**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-04 | **Client Sample Name:** NASA/JPL, MW-23-2, 2/8/2022 10:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 02:02	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202850-04 | **Client Sample Name:** NASA/JPL, MW-23-2, 2/8/2022 10:15:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 02:02	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202850-04 | **Client Sample Name:** NASA/JPL, MW-23-2, 2/8/2022 10:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0015**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000029		1
Total Recoverable Chromium	**1.8**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/14/22 14:00	02/14/22 16:19	MKB	IC-4	1	B131838	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 14:47	KHS	PE-EL2	1	B131715	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-05 | **Client Sample Name:** NASA/JPL, DUP-5-1Q22, 2/8/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.99**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.40**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-05 | **Client Sample Name:** NASA/JPL, DUP-5-1Q22, 2/8/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.98**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	**0.21**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND	**J**	1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**2.2**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-05 | **Client Sample Name:** NASA/JPL, DUP-5-1Q22, 2/8/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	97.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 02:26	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202850-05 | **Client Sample Name:** NASA/JPL, DUP-5-1Q22, 2/8/2022 10:30:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 02:26	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202850-05 | **Client Sample Name:** NASA/JPL, DUP-5-1Q22, 2/8/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0015**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000029		1
Total Recoverable Chromium	**1.5**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/14/22 14:00	02/14/22 16:29	MKB	IC-4	1	B131838	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 14:48	KHS	PE-EL2	1	B131715	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-06 | **Client Sample Name:** NASA/JPL, MW-3-4, 2/8/2022 12:15:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-06 | **Client Sample Name:** NASA/JPL, MW-3-4, 2/8/2022 12:15:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-06 | **Client Sample Name:** NASA/JPL, MW-3-4, 2/8/2022 12:15:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 02:51	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202850-06 | **Client Sample Name:** NASA/JPL, MW-3-4, 2/8/2022 12:15:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 02:51	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202850-06 | **Client Sample Name:** NASA/JPL, MW-3-4, 2/8/2022 12:15:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00061**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000029		1
Total Recoverable Chromium	**61**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/14/22 14:00	02/14/22 16:38	MKB	IC-4	1	B131838	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 14:50	KHS	PE-EL2	1	B131715	EPA 200.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-07 | **Client Sample Name:** NASA/JPL, MW-3-3, 2/8/2022 12:45:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-07 | **Client Sample Name:** NASA/JPL, MW-3-3, 2/8/2022 12:45:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-07 | **Client Sample Name:** NASA/JPL, MW-3-3, 2/8/2022 12:45:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 03:15	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202850-07 | **Client Sample Name:** NASA/JPL, MW-3-3, 2/8/2022 12:45:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 03:15	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202850-07 | **Client Sample Name:** NASA/JPL, MW-3-3, 2/8/2022 12:45:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00067**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000029		1
Total Recoverable Chromium	**6.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/14/22 14:00	02/14/22 17:17	MKB	IC-4	1	B131838	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 14:51	KHS	PE-EL2	1	B131715	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-08 | **Client Sample Name:** NASA/JPL, DUP-6-1Q22, 2/8/2022 1:00:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-08 | **Client Sample Name:** NASA/JPL, DUP-6-1Q22, 2/8/2022 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-08 | **Client Sample Name:** NASA/JPL, DUP-6-1Q22, 2/8/2022 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	115	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	96.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 03:40	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202850-08 | **Client Sample Name:** NASA/JPL, DUP-6-1Q22, 2/8/2022 1:00:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 03:40	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202850-08 | **Client Sample Name:** NASA/JPL, DUP-6-1Q22, 2/8/2022 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00069**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000029		1
Total Recoverable Chromium	**3.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/14/22 14:00	02/14/22 17:26	MKB	IC-4	1	B131838	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 14:53	KHS	PE-EL2	1	B131715	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-09 | **Client Sample Name:** NASA/JPL, MW-3-2, 2/8/2022 1:30:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-09 | **Client Sample Name:** NASA/JPL, MW-3-2, 2/8/2022 1:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-09 | **Client Sample Name:** NASA/JPL, MW-3-2, 2/8/2022 1:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 04:04	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202850-09 | **Client Sample Name:** NASA/JPL, MW-3-2, 2/8/2022 1:30:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 04:04	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202850-09 | **Client Sample Name:** NASA/JPL, MW-3-2, 2/8/2022 1:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00062**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000029		1
Total Recoverable Chromium	**0.97**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/14/22 14:00	02/14/22 17:36	MKB	IC-4	1	B131838	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 14:55	KHS	PE-EL2	1	B131715	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-10 | **Client Sample Name:** NASA/JPL, EB-7-020822, 2/8/2022 1:10:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-10 | **Client Sample Name:** NASA/JPL, EB-7-020822, 2/8/2022 1:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	**0.30**	**ug/L**	**0.50**	**0.21**	**EPA-524.2**	ND	**J**	1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2202850-10 | **Client Sample Name:** NASA/JPL, EB-7-020822, 2/8/2022 1:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	116	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 04:29	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2202850-10 | **Client Sample Name:** NASA/JPL, EB-7-020822, 2/8/2022 1:10:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/10/22 12:00	02/11/22 04:29	MGC	MS-V5	1	B131503	EPA 524.2

DCN = Data Continuation Number

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Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2202850-10 | **Client Sample Name:** NASA/JPL, EB-7-020822, 2/8/2022 1:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000091**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000029	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/14/22 14:00	02/14/22 17:45	MKB	IC-4	1	B131838	No Prep
2	EPA-200.8	02/11/22 20:10	02/14/22 14:56	KHS	PE-EL2	1	B131715	EPA 200.2

DCN = Data Continuation Number

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Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131503						
Benzene	B131503-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B131503-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B131503-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B131503-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B131503-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B131503-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B131503-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B131503-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B131503-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B131503-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B131503-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B131503-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B131503-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B131503-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B131503-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B131503-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B131503-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B131503-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B131503-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B131503-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B131503-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B131503-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B131503-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B131503-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B131503-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B131503-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B131503-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B131503-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B131503-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B131503-BLK1	ND	ug/L	0.50	0.14	

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Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B131503						
trans-1,3-Dichloropropene	B131503-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B131503-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B131503-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B131503-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B131503-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B131503-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B131503-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B131503-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B131503-BLK1	ND	ug/L	0.50	0.12	
Styrene	B131503-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B131503-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B131503-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B131503-BLK1	ND	ug/L	0.50	0.23	
Toluene	B131503-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B131503-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B131503-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B131503-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B131503-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B131503-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B131503-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B131503-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B131503-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B131503-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B131503-BLK1	ND	ug/L	0.50	0.18	
Acetone	B131503-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B131503-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B131503-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B131503-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B131503-BLK1	ND	ug/L	2.0	2.0	
Carbon disulfide	B131503-BLK1	ND	ug/L	0.50	0.48	
trans-1,4-Dichloro-2-butene	B131503-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B131503-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B131503-BLK1	ND	ug/L	4.0	1.3	

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Project Number: 1Q22
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: B131503						
Ethyl t-butyl ether	B131503-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B131503-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B131503-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B131503-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B131503-BLK1	ND	ug/L	5.0	3.3	
Methyl iodide	B131503-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B131503-BLK1	ND	ug/L	5.0	2.4	
Methyl methacrylate	B131503-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B131503-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B131503-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B131503-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B131503-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B131503-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	**B131503-BLK1**	**114**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B131503-BLK1**	**97.9**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B131503-BLK1**	**96.7**	%	**80 - 120 (LCL - UCL)**		

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Powell, OH 43065

Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131503										
Benzene	B131503-BS1	LCS	23.730	25.000	ug/L	94.9		70 - 130		
Bromodichloromethane	B131503-BS1	LCS	25.460	25.000	ug/L	102		70 - 130		
Chlorobenzene	B131503-BS1	LCS	23.010	25.000	ug/L	92.0		70 - 130		
Chloroethane	B131503-BS1	LCS	24.190	25.000	ug/L	96.8		70 - 130		
1,4-Dichlorobenzene	B131503-BS1	LCS	24.460	25.000	ug/L	97.8		70 - 130		
1,1-Dichloroethane	B131503-BS1	LCS	24.610	25.000	ug/L	98.4		70 - 130		
1,1-Dichloroethene	B131503-BS1	LCS	26.000	25.000	ug/L	104		70 - 130		
Toluene	B131503-BS1	LCS	23.590	25.000	ug/L	94.4		70 - 130		
Trichloroethene	B131503-BS1	LCS	25.900	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B131503-BS1	LCS	11.330	10.000	ug/L	113		75 - 125		
Toluene-d8 (Surrogate)	B131503-BS1	LCS	10.010	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	B131503-BS1	LCS	10.530	10.000	ug/L	105		80 - 120		

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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: B131503	Used client sample: N										
Benzene	MS	2202601-07	ND	24.390	25.000	ug/L		97.6		70 - 130	
	MSD	2202601-07	ND	24.450	25.000	ug/L	0.2	97.8	20	70 - 130	
Bromodichloromethane	MS	2202601-07	ND	26.640	25.000	ug/L		107		70 - 130	
	MSD	2202601-07	ND	25.730	25.000	ug/L	3.5	103	20	70 - 130	
Chlorobenzene	MS	2202601-07	ND	23.290	25.000	ug/L		93.2		70 - 130	
	MSD	2202601-07	ND	23.050	25.000	ug/L	1.0	92.2	20	70 - 130	
Chloroethane	MS	2202601-07	ND	24.850	25.000	ug/L		99.4		70 - 130	
	MSD	2202601-07	ND	24.480	25.000	ug/L	1.5	97.9	20	70 - 130	
1,4-Dichlorobenzene	MS	2202601-07	ND	24.300	25.000	ug/L		97.2		70 - 130	
	MSD	2202601-07	ND	23.850	25.000	ug/L	1.9	95.4	20	70 - 130	
1,1-Dichloroethane	MS	2202601-07	ND	25.820	25.000	ug/L		103		70 - 130	
	MSD	2202601-07	ND	25.320	25.000	ug/L	2.0	101	20	70 - 130	
1,1-Dichloroethene	MS	2202601-07	ND	27.150	25.000	ug/L		109		70 - 130	
	MSD	2202601-07	ND	26.760	25.000	ug/L	1.4	107	20	70 - 130	
Toluene	MS	2202601-07	ND	24.120	25.000	ug/L		96.5		70 - 130	
	MSD	2202601-07	ND	23.910	25.000	ug/L	0.9	95.6	20	70 - 130	
Trichloroethene	MS	2202601-07	ND	24.670	25.000	ug/L		98.7		70 - 130	
	MSD	2202601-07	ND	24.440	25.000	ug/L	0.9	97.8	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2202601-07	ND	11.150	10.000	ug/L		112		75 - 125	
	MSD	2202601-07	ND	11.020	10.000	ug/L	1.2	110		75 - 125	
Toluene-d8 (Surrogate)	MS	2202601-07	ND	9.9200	10.000	ug/L		99.2		80 - 120	
	MSD	2202601-07	ND	9.8700	10.000	ug/L	0.5	98.7		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	2202601-07	ND	10.150	10.000	ug/L		102		80 - 120	
	MSD	2202601-07	ND	10.200	10.000	ug/L	0.5	102		80 - 120	

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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131503						
Chloroacetonitrile	B131503-BLK1	0	ug/L			
1-Chlorobutane	B131503-BLK1	0	ug/L			
1,1-Dichloropropanone	B131503-BLK1	0	ug/L			
Methyl acrylate	B131503-BLK1	0	ug/L			
Nitrobenzene	B131503-BLK1	0	ug/L			
2-Nitropropane	B131503-BLK1	0	ug/L			

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Project Manager: David Conner

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B131715						
Total Recoverable Chromium	B131715-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B131838						
Hexavalent Chromium	**B131838-BLK1**	**0.000029000**	**mg/L**	**0.00020**	**0.000020**	**J**

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Reported: 03/24/2022 11:51
Project: JPL- GW Monitoring Wells-CLP
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Project Manager: David Conner

Metals Analysis

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B131715										
Total Recoverable Chromium	B131715-BS1	LCS	42.450	40.000	ug/L	106		85 - 115		
QC Batch ID: B131838										
Hexavalent Chromium	B131838-BS1	LCS	0.020161	0.020000	mg/L	101		90 - 110		
	B131838-BSD1	LCSD	0.019820	0.020000	mg/L	99.1	1.7	90 - 110	10	

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Project Number: 1Q22
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: B131715	Used client sample: N										
Total Recoverable Chromium	DUP	2202601-07	ND	ND		ug/L			20		
	MS	2202601-07	ND	42.357	40.000	ug/L		106		70 - 130	
	MSD	2202601-07	ND	38.857	40.000	ug/L	8.6	97.1	20	70 - 130	
QC Batch ID: B131838	Used client sample: Y - Description: MW-23-4, 02/08/2022 09:00										
Hexavalent Chromium	DUP	2202850-02	0.0041300	0.0041230		mg/L	0.2		10		
	MS	2202850-02	0.0041300	0.024416	0.020202	mg/L		100		90 - 110	
	MSD	2202850-02	0.0041300	0.024559	0.020202	mg/L	0.6	101	10	90 - 110	

Torrent LABORATORY, INC.

ANALYTICAL SUMMARY DATA PACKAGE

Level II

SDG # DoD2203006

Project Name: JPL/2202850

Project Location:

SUBMITTAL TO:

Natalie Serda
Pace Analytical Services,Inc
940 S Harney Street
Seattle, Washington 98108

SUBMITTAL BY:

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Tel (408)263-5258
Fax (408)263-8293

LABORATORY CONTACT PERSON:

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Email: pm@torrentlaboratory.com
Original Report Date: 3/18/2022
Report Revision:
Revision Date:

Total Pages: 16

THIS DOCUMENT MEETS DoD QSM 5.3 STANDARDS

The results relate to only the samples associated with the referenced SDG. The submitted data has been produced in accordance with laboratory procedures. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Torrent Laboratory, Inc

Kathie Evans
Project Manager

March 18, 2022
Date

Page 1 of 16

Torrent LABORATORY, INC.

TABLE OF CONTENTS

Torrent LABORATORY, INC.

CASE NARRATIVE

No issues were encountered with receiving, preparation, analysis or reporting of the results associated with this work order.

Analytical Comments for method 314.0
Samples were analyzed past the method recommended holding time of 28 days with client approval.

LAB QUALIFIERS

U - Analyte was not detected and is reported as less than the MDL or as defined by the customer. The MDL has been adjusted for any dilution or concentration of the sample.

J - The reported result is an estimated value (the sample concentration is between the established MDL and the client specified PQL).

B - Blank contamination. The recorded result is associated with a blank with a detected value at greater than 1/2 the PQL.

D - Sample/surrogate spike concentration not reportable due to required dilution of the sample.

E - The reported result is an estimated result. The reported result was outside of the calibration range of the instrument but within linear range.

NR - Not Recoverable. The sample concentration is greater than four times the spike concentration.

Q or S - One or more quality control criteria failed (e.g., LCS recovery, surrogate spike)

Torrent LABORATORY, INC.

Sample Receipt Checklist

Client Name: Pace Analytical Services,Inc
Project Name: JPL
Work Order No.: DoD2203006

Date and Time Received: 3/4/2022
Received By: Emily Ragudo
Physically Logged By: Helena Ueng
Checklist Completed By: Helena Ueng
Carrier Name: GLS

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Applicable

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Applicable
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes			
Container/Temp Blank temperature in compliance?	Yes	Temperature:	3.0	°C
Water-VOA vials have zero headspace?				
Water-pH acceptable upon receipt?	N/A			

pH Checked by: N/A
pH Adjusted by: N/A

Comments:

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Torrent LABORATORY, INC.

Login Summary Report

Client ID:	TL5198	Pace Analytical Services,Inc	**TAT Requested:**	10 Day:10
Project Name:	JPL		**Date Received:**	3/4/2022
Project # :	2202850		**Time Received:**	9:37 am
Report Due Date:	3/18/2022			

Comments:

Work Order # : DoD2203006

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
DoD2203006-001A	MW-23-3	02/08/22 9:45	Water	03/25/22			DoD_314.0_W	
Sample Note:	Level 3 report (Not a DoD project, but needs DoD report format) **Samples expire 3/8/22!!							
DoD2203006-002A	MW-23-2	02/08/22 10:15	Water	03/25/22			DoD_314.0_W	
DoD2203006-003A	DUP-5-1Q22	02/08/22 10:30	Water	03/25/22			DoD_314.0_W	
DoD2203006-004A	MW-3-4	02/08/22 12:15	Water	03/25/22			DoD_314.0_W	
DoD2203006-005A	MW-3-3	02/08/22 12:45	Water	03/25/22			DoD_314.0_W	
DoD2203006-006A	DUP-6-1Q22	02/08/22 13:00	Water	03/25/22			DoD_314.0_W	
DoD2203006-007A	MW-3-2	02/08/22 13:30	Water	03/25/22			DoD_314.0_W	
DoD2203006-008A	EB-7-020822	02/08/22 13:10	Water	03/25/22			DoD_314.0_W	

Torrent LABORATORY, INC.

Chain of Custody

SUBCONTRACT ORDER

BC Laboratories

2202850

DOD 220 3006

SENDING LABORATORY:

BC Laboratories
4100 Atlas Ct
Bakersfield, CA 93308
Phone: 661-327-4911
Fax: 661-327-1918
Project Manager: Natalie Serda

RECEIVING LABORATORY:

Torrent Laboratory $TRRTL
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone :(408) 263-5258
Fax: (000) 000-0000

DOD

LEVEL III

Analysis	Due	Expires	Laboratory ID	Comments
-001A **Sample ID: 2202850-03**	**Water**	**Sampled:02/08/22 09:45**		**Level III/ MW-23-3**
i314.0w Perchlorate (ug/L)	02/22/22 17:00	03/08/22 09:45		Global ID #0000000000 1BTST
Containers Supplied: pT PE				
-002A **Sample ID: 2202850-04**	**Water**	**Sampled:02/08/22 10:15**		**Level III/ MW-23-2**
i314.0w Perchlorate (ug/L)	02/22/22 17:00	03/08/22 10:15		
Containers Supplied:				
-003A **Sample ID: 2202850-05**	**Water**	**Sampled:02/08/22 10:30**		**Level III/ DUP-5-1Q22**
i314.0w Perchlorate (ug/L)	02/22/22 17:00	03/08/22 10:30		
Containers Supplied:				
-004A **Sample ID: 2202850-06**	**Water**	**Sampled:02/08/22 12:15**		**Level III/ MW-3-4**
i314.0w Perchlorate (ug/L)	02/22/22 17:00	03/08/22 12:15		
Containers Supplied:				
-005A **Sample ID: 2202850-07**	**Water**	**Sampled:02/08/22 12:45**		**Level III/ MW-3-3**
i314.0w Perchlorate (ug/L)	02/22/22 17:00	03/08/22 12:45		
Containers Supplied:				

Released By	Date	Received By	Date
	3-3-22		
Released By	Date	Received By	Date
	3-4-22 9:37		3/04/22 9:37

GLS - Temp = 3°C #3

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Torrent LABORATORY, INC.

SUBCONTRACT ORDER

BC Laboratories

2202850

DOD220 3006

Analysis	Due	Expires	Laboratory ID	Comments
-006A **Sample ID: 2202850-08**	**Water**	**Sampled:02/08/22 13:00**		**Level III/ DUP-6-1Q22**
i314.0w Perchlorate (ug/L)	02/22/22 17:00	03/08/22 13:00		
Containers Supplied:				
-007A **Sample ID: 2202850-09**	**Water**	**Sampled:02/08/22 13:30**		**Level III/ MW-3-2**
i314.0w Perchlorate (ug/L)	02/22/22 17:00	03/08/22 13:30		
Containers Supplied:				
-008A **Sample ID: 2202850-10**	**Water**	**Sampled:02/08/22 13:10**		**Level III/ EB-7-020822**
i314.0w Perchlorate (ug/L)	02/22/22 17:00	03/08/22 13:10		
Containers Supplied:				

LEVEL III

Released By	Date	Received By	Date
[signature]	3-3-22		
Released By	Date	Received By	Date

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Torrent LABORATORY, INC.

SAMPLE RESULTS DATA

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/04/22, 9:37 am
Date Reported: 03/18/22

Client Sample ID:	MW-23-3	**Lab Sample ID:**	DoD2203006-001A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202850		
Date/Time Sampled:	02/08/22 / 9:45		
SDG:	SDGDoD2203006		
Tag Number:	2202850-03		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**3.89**	J	ug/L	03/10/22	4:27	PH	464423

Client Sample ID:	MW-23-2	**Lab Sample ID:**	DoD2203006-002A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202850		
Date/Time Sampled:	02/08/22 / 10:15		
SDG:	SDGDoD2203006		
Tag Number:	2202850-04		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**4.99**		ug/L	03/10/22	5:33	PH	464423

Client Sample ID:	DUP-5-1Q22	**Lab Sample ID:**	DoD2203006-003A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202850		
Date/Time Sampled:	02/08/22 / 10:30		
SDG:	SDGDoD2203006		
Tag Number:	2202850-05		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/10/22	5:55	PH	464423

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/04/22, 9:37 am
Date Reported: 03/18/22

Client Sample ID:	MW-3-4	**Lab Sample ID:**	DoD2203006-004A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202850		
Date/Time Sampled:	02/08/22 / 12:15		
SDG:	SDGDoD2203006		
Tag Number:	2202850-06		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**1.06**	J	ug/L	03/10/22	6:17	PH	464423

Client Sample ID:	MW-3-3	**Lab Sample ID:**	DoD2203006-005A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202850		
Date/Time Sampled:	02/08/22 / 12:45		
SDG:	SDGDoD2203006		
Tag Number:	2202850-07		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**0.894**	J	ug/L	03/10/22	6:39	PH	464423

Client Sample ID:	DUP-6-1Q22	**Lab Sample ID:**	DoD2203006-006A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202850		
Date/Time Sampled:	02/08/22 / 13:00		
SDG:	SDGDoD2203006		
Tag Number:	2202850-08		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**0.954**	J	ug/L	03/10/22	7:45	PH	464423

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/04/22, 9:37 am
Date Reported: 03/18/22

Client Sample ID:	MW-3-2	**Lab Sample ID:**	DoD2203006-007A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202850		
Date/Time Sampled:	02/08/22 / 13:30		
SDG:	SDGDoD2203006		
Tag Number:	2202850-09		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/10/22	8:07	PH	464423

Client Sample ID:	EB-7-020822	**Lab Sample ID:**	DoD2203006-008A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2202850		
Date/Time Sampled:	02/08/22 / 13:10		
SDG:	SDGDoD2203006		
Tag Number:	2202850-10		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/10/22	8:29	PH	464423

SAMPLE QC DATA

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	DoD2203006	**Prep Method:**	314.0WP	**Prep Date:**	03/09/22	**Prep Batch:**	1140042
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	18:00	**Analytical Batch:**	464423
Units:	ug/L			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	1140042-MB
Analyzed Date:	3/10/2022	**Analyzed Time:**	3:21	**Analyzed By:**	PH		

Parameters	DL	LOD	LOQ	Method Blank Conc.	Lab Qualifier
Perchlorate	0.800	2.00	4.00	2.00	J

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Torrent LABORATORY, INC.

LCS/LCSD Summary Report

		Prep Method:	314.0WP	**Prep Date:**	03/09/22	**Prep Batch:**	1140042
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	18:00	**Analytical Batch:**	464423
Units:	ug/L			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	1140042-LCSD
Analyzed Date:	3/10/2022	**Analyzed Time:**	4:05	**Analyzed By:**	PH		

Parameters	Spike Conc.	LCS % Recovery	LCSD % Recovery	% Recovery Limits	LCS/LCSD % RPD	% RPD Limits	Lab Qualifier
Perchlorate	50	98.7	99.1	84 - 119	0.404	15	

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Torrent LABORATORY, INC.

MS/MSD Summary Report

Work Order:	DoD2203006	**Prep Method:**	314.0WP	**Prep Date:**	03/09/22	**Prep Batch:**	1140042
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	18:00	**Analytical Batch:**	464423
Spiked Sample:	DoD2203006-001A			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	DoD2203006-001A-MS3-1140042
Units:	ug/L						
Analyzed Date:	3/10/2022	**Analyzed Time:**	5:11	**Analyzed By:**	PH		

Parameters	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	% Recovery Limits	MS/MSD % RPD	% RPD Limits	Lab Qualifier
Perchlorate	0	50	120	113	84 - 119	0.664	15	J

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Torrent LABORATORY, INC.

End of Level II Report for SDG SDGDoD2203006

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Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell	**Reported:** 03/24/2022 11:51
3761 Attucks Drive	Project: JPL- GW Monitoring Wells-CLP
Powell, OH 43065	Project Number: 1Q22
	Project Manager: David Conner

Notes And Definitions

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

Date of Report: 03/24/2022

David Conner

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Client Project:	1Q22
BCL Project:	JPL- GW Monitoring Wells-CLP
BCL Work Order:	2203057
Invoice ID:	

Enclosed are the results of analyses for samples received by the laboratory on 2/9/2022. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1001286983

Sincerely,

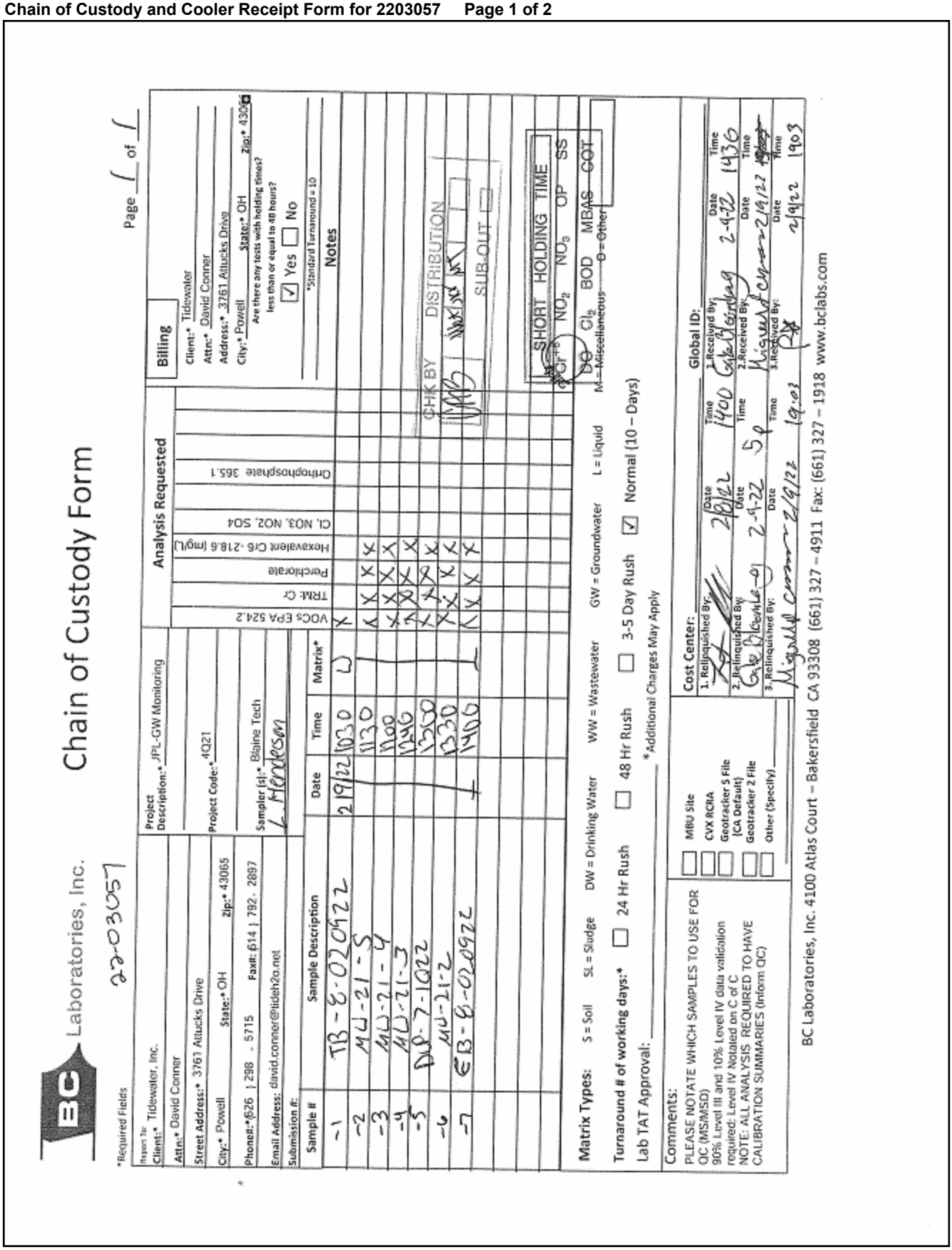
Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Operations Manager

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

Table of Contents

Chain of Custody and Cooler Receipt Form for 2203057 Page 1 of 2



BC Laboratories, Inc.

Chain of Custody Form

22-03057

Page 1 of 1

*Required Fields

Report To
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone:*(626) 798 - 5715 Fax: (614) 792-2897
Email Address: david.conner@tideh2o.net
Submission #:

Project Description:* JPL-GW Monitoring
Project Code:* 4Q21
Sampler (s):* Blaine Tech
L. Hermes

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

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 .218.6 (mg/L)	Cl, NO3, NO2, SO4	Orthophosphate 365.1	Notes
-1	TB-E-020922	2/9/22	1030	D	X	X	X	X			
-2	MW-21-5		1130		X	X	X	X			
-3	MW-21-4		1109		X	X	X	X			
-4	MW-21-3		1246		X	X	X	X			
-5	DUP-1022		1330		X	X	X	X			CHK BY DISTRIBUTION
-6	MW-21-2		1330		X	X	X	X			
-7	EB-G-020922	↓	1400	↓	X	X	X	X			SUB-OUT ☐

Analysis Requested

SHORT HOLDING TIME

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

Cr+6 NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

Turnaround # of working days:* ☐ 24 Hr Rush ☐ 48 Hr Rush ☐ 3-5 Day Rush ☑ Normal (10 – Days)
Lab TAT Approval: _____ *Additional Charges May Apply

Comments:
PLEASE NOTATE WHICH SAMPLES TO USE FOR QC (MS/MSD)
90% Level III and 10% Level IV data validation required; Level IV Notated on C 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.		2/9/22	1400		2-9-22	1436
2.		2-9-22	5p			
3.		2/9/22	19:03		2/9/22	1903

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

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 22-03057

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

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

FREE LIQUID
YES ☐ NO ☐
(W) / S

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

Custody Seals: Ice Chest ☐ 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: 0.92 Container: PE Thermometer ID: 274

Temperature: (A) 0.6 °C / (C) 0.3 °C

Date/Time 2/9/22 1903

Analyst Init PR

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / (16oz) PE UNPRES		E	E	E	E	E	E			
2oz Cr^{+6}		D	D	D	D	D	D			
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / (8oz) 16oz		F	F	F	F	F	F			
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL		A-C	A-C	A-C	A-C	A-C	A-C			
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:_____

Sample Numbering Completed By: PAE Date/Time: 2/10/22 1820

A = Actual / C = Corrected

Rev 22 04/13/21

[S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2203057-01	**COC Number:**	---	**Receive Date:**	02/09/2022 19:03
	Project Number:	NASA/JPL	**Sampling Date:**	02/09/2022 10:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-8-020922	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): TB-8-020922			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
2203057-02	**COC Number:**	---	**Receive Date:**	02/09/2022 19:03
	Project Number:	NASA/JPL	**Sampling Date:**	02/09/2022 11:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-21-5	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): MW-21-5			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
2203057-03	**COC Number:**	---	**Receive Date:**	02/09/2022 19:03
	Project Number:	NASA/JPL	**Sampling Date:**	02/09/2022 11:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-21-4	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): MW-21-4			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2203057-04	**COC Number:**	---	**Receive Date:**	02/09/2022 19:03
	Project Number:	NASA/JPL	**Sampling Date:**	02/09/2022 12:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-21-3	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-21-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2203057-05	**COC Number:**	---	**Receive Date:**	02/09/2022 19:03
	Project Number:	NASA/JPL	**Sampling Date:**	02/09/2022 13:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-7-IQ22	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-7-IQ22	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2203057-06	**COC Number:**	---	**Receive Date:**	02/09/2022 19:03
	Project Number:	NASA/JPL	**Sampling Date:**	02/09/2022 13:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-21-2	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-21-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

2203057-07

COC Number: ---
Project Number: NASA/JPL
Sampling Location: ---
Sampling Point: EB-8-020922
Sampled By: BTST

Receive Date: 02/09/2022 19:03
Sampling Date: 02/09/2022 14:00
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Delivery Work Order:
Global ID: 0000000000
Location ID (FieldPoint): EB-8-020922
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

Natalie Serda

From: David Conner <david.conner@tideh2o.net>
Sent: Tuesday, March 8, 2022 1:33 PM
To: Natalie Serda
Subject: RE: [EXTERNAL]Perchlorate 2202601, 2202850, 2203057 (GW's)

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Natalie,

Thanks for letting me know. Yes, please have them report past hold time.

Thank you,

David Conner, PG
Tidewater, Inc.
Cell: 626-298-5715

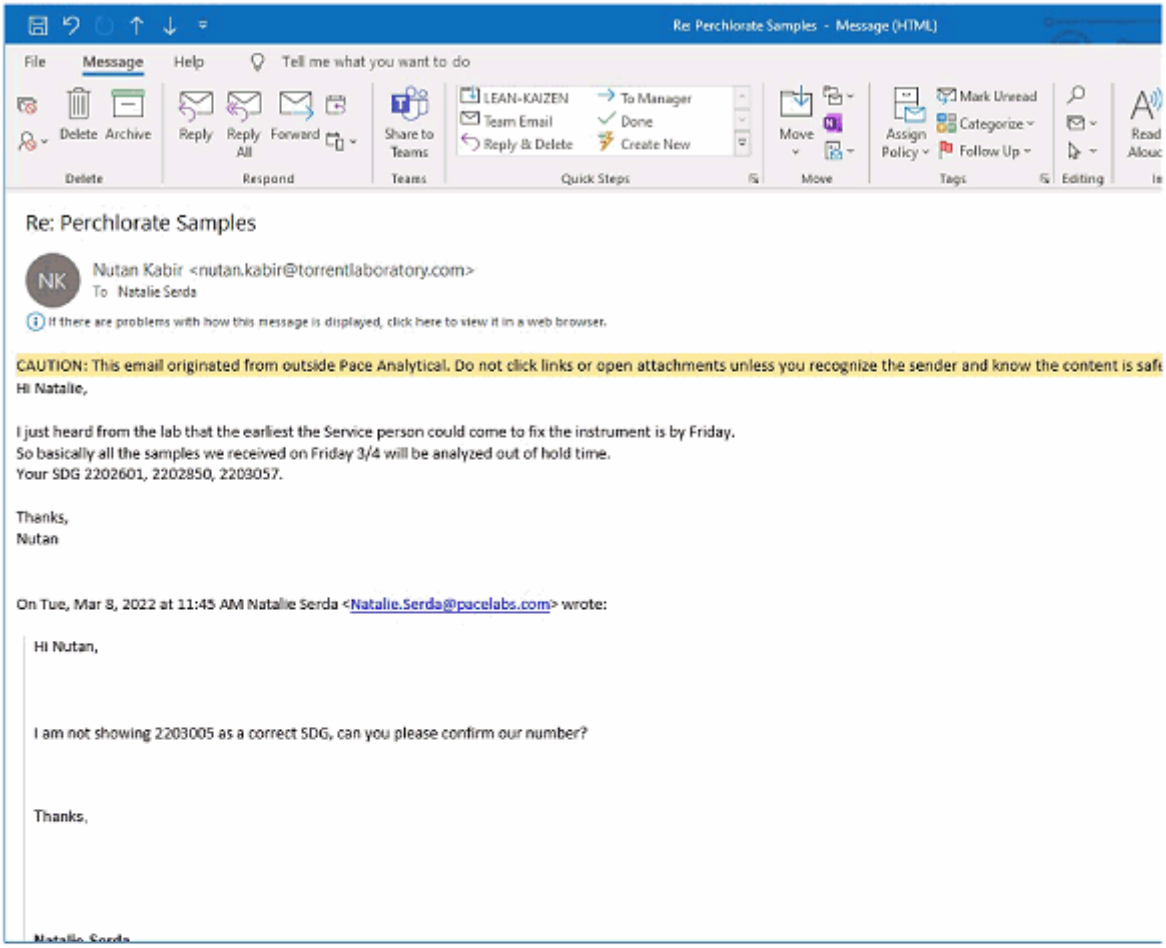
From: Natalie Serda <Natalie.Serda@pacelabs.com>
Sent: Tuesday, March 8, 2022 1:32 PM
To: David Conner <david.conner@tideh2o.net>
Subject: [EXTERNAL]Perchlorate 2202601, 2202850, 2203057 (GW's)
Importance: High

CAUTION: External email, DO NOT click on any links/attachments unless you recognize the sender and know the content is safe

Hi David,

I was advised that the sub lab we sent the perchlorates to for this SDG also just ran into instrument issues and were not able to run within the hold times. Please let me know if you would still like to have them reported past hold.

1



Re: Perchlorate Samples - Message (HTML)

File Message Help Tell me what you want to do

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Re: Perchlorate Samples

NK Nutan Kabir <nutan.kabir@torrentlaboratory.com>
To Natalie Serda

If there are problems with how this message is displayed, click here to view it in a web browser.

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Hi Natalie,

I just heard from the lab that the earliest the Service person could come to fix the instrument is by Friday.
So basically all the samples we received on Friday 3/4 will be analyzed out of hold time.
Your SDG 2202601, 2202850, 2203057.

Thanks,
Nutan

On Tue, Mar 8, 2022 at 11:45 AM Natalie Serda <Natalie.Serda@pacelabs.com> wrote:

> Hi Nutan,
>
> I am not showing 2203005 as a correct SDG, can you please confirm our number?
>
> Thanks,
>
> Natalie Serda

Thanks,

Natalie Serda
Project Manager II
4100 Atlas Ct. Bakersfield, CA 93308
O: 661.327.4911 | M: 661.912.4694 | pacelabs.com

For Courier Scheduling, please contact Mike Graham 661.201.4158 – michael.graham@pacelabs.com (Please note a Min. of 24 Hr. Notice is required to ensure we can accommodate all requests)

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Tidewater Inc. - Powell
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Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-01 | **Client Sample Name:** NASA/JPL, TB-8-020922, 2/9/2022 10:30:00AM

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

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Tidewater Inc. - Powell
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Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-01 | **Client Sample Name:** NASA/JPL, TB-8-020922, 2/9/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-01 | **Client Sample Name:** NASA/JPL, TB-8-020922, 2/9/2022 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 21:19	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2203057-01 | **Client Sample Name:** NASA/JPL, TB-8-020922, 2/9/2022 10:30:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 21:19	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-02 | **Client Sample Name:** NASA/JPL, MW-21-5, 2/9/2022 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**7.0**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.21**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-02 | **Client Sample Name:** NASA/JPL, MW-21-5, 2/9/2022 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.8**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.30**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-02 | **Client Sample Name:** NASA/JPL, MW-21-5, 2/9/2022 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 21:44	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2203057-02 | **Client Sample Name:** NASA/JPL, MW-21-5, 2/9/2022 11:30:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 21:44	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2203057-02 | **Client Sample Name:** NASA/JPL, MW-21-5, 2/9/2022 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0012**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000026		1
Total Recoverable Chromium	**1.5**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/15/22 01:00	02/15/22 08:45	SAV	IC-4	1	B131900	No Prep
2	EPA-200.8	02/14/22 17:45	02/15/22 12:35	ARD	PE-EL2	1	B131859	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-03 | **Client Sample Name:** NASA/JPL, MW-21-4, 2/9/2022 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**5.2**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-03 | **Client Sample Name:** NASA/JPL, MW-21-4, 2/9/2022 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.2**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**0.58**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-03 | **Client Sample Name:** NASA/JPL, MW-21-4, 2/9/2022 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 22:09	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2203057-03 | **Client Sample Name:** NASA/JPL, MW-21-4, 2/9/2022 11:00:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 22:09	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2203057-03 | **Client Sample Name:** NASA/JPL, MW-21-4, 2/9/2022 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.0013**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000026		1
Total Recoverable Chromium	**1.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/15/22 01:00	02/15/22 09:24	SAV	IC-4	1	B131900	No Prep
2	EPA-200.8	02/14/22 17:45	02/15/22 12:37	ARD	PE-EL2	1	B131859	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-04 | **Client Sample Name:** NASA/JPL, MW-21-3, 2/9/2022 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.58**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.18**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-04 | **Client Sample Name:** NASA/JPL, MW-21-3, 2/9/2022 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.97**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**1.2**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-04 | **Client Sample Name:** NASA/JPL, MW-21-3, 2/9/2022 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 22:33	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2203057-04 | **Client Sample Name:** NASA/JPL, MW-21-3, 2/9/2022 12:40:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 22:33	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2203057-04 | **Client Sample Name:** NASA/JPL, MW-21-3, 2/9/2022 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00012**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000026	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/15/22 01:00	02/15/22 09:33	SAV	IC-4	1	B131900	No Prep
2	EPA-200.8	02/14/22 17:45	02/15/22 12:38	ARD	PE-EL2	1	B131859	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-05 | **Client Sample Name:** NASA/JPL, DUP-7-IQ22, 2/9/2022 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.72**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	**0.25**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-05 | **Client Sample Name:** NASA/JPL, DUP-7-IQ22, 2/9/2022 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.7**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	**2.0**	**ug/L**	**0.50**	**0.19**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-05 | **Client Sample Name:** NASA/JPL, DUP-7-IQ22, 2/9/2022 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 22:58	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2203057-05 | **Client Sample Name:** NASA/JPL, DUP-7-IQ22, 2/9/2022 1:00:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 22:58	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2203057-05 | **Client Sample Name:** NASA/JPL, DUP-7-IQ22, 2/9/2022 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000097**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000026	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/15/22 01:00	02/15/22 09:43	SAV	IC-4	1	B131900	No Prep
2	EPA-200.8	02/14/22 17:45	02/15/22 12:40	ARD	PE-EL2	1	B131859	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-06 | **Client Sample Name:** NASA/JPL, MW-21-2, 2/9/2022 1:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Benzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.46	EPA-524.2	ND		1
Bromomethane	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Chloroform	**0.26**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.89	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.22	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-06 | **Client Sample Name:** NASA/JPL, MW-21-2, 2/9/2022 1:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.45**	**ug/L**	**0.50**	**0.23**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
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Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-06 | **Client Sample Name:** NASA/JPL, MW-21-2, 2/9/2022 1:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 23:22	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2203057-06 | **Client Sample Name:** NASA/JPL, MW-21-2, 2/9/2022 1:30:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 23:22	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2203057-06 | **Client Sample Name:** NASA/JPL, MW-21-2, 2/9/2022 1:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000066**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000026	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/15/22 01:00	02/15/22 10:12	MKB	IC-4	1	B131900	No Prep
2	EPA-200.8	02/14/22 17:45	02/15/22 12:42	ARD	PE-EL2	1	B131859	EPA 200.2

DCN = Data Continuation Number

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Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-07 | **Client Sample Name:** NASA/JPL, EB-8-020922, 2/9/2022 2:00:00PM

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

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-07 | **Client Sample Name:** NASA/JPL, EB-8-020922, 2/9/2022 2:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203057-07 | **Client Sample Name:** NASA/JPL, EB-8-020922, 2/9/2022 2:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.8	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 23:47	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2203057-07 | **Client Sample Name:** NASA/JPL, EB-8-020922, 2/9/2022 2:00:00PM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/15/22 23:47	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2203057-07 | **Client Sample Name:** NASA/JPL, EB-8-020922, 2/9/2022 2:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.000078**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	0.000026	**J**	1
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/15/22 01:00	02/15/22 10:21	MKB	IC-4	1	B131900	No Prep
2	EPA-200.8	02/14/22 17:45	02/15/22 12:51	ARD	PE-EL2	1	B131859	EPA 200.2

DCN = Data Continuation Number

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Tidewater Inc. - Powell
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Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131890						
Benzene	B131890-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B131890-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B131890-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B131890-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B131890-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B131890-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B131890-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B131890-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B131890-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B131890-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B131890-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B131890-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B131890-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B131890-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B131890-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B131890-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B131890-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B131890-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B131890-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B131890-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B131890-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B131890-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B131890-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B131890-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B131890-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B131890-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B131890-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B131890-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B131890-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B131890-BLK1	ND	ug/L	0.50	0.14	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131890						
trans-1,3-Dichloropropene	B131890-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B131890-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B131890-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B131890-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B131890-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B131890-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B131890-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B131890-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B131890-BLK1	ND	ug/L	0.50	0.12	
Styrene	B131890-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B131890-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B131890-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B131890-BLK1	ND	ug/L	0.50	0.23	
Toluene	B131890-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B131890-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B131890-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B131890-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B131890-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B131890-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B131890-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B131890-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B131890-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B131890-BLK1	ND	ug/L	0.50	0.18	
Acetone	B131890-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B131890-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B131890-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B131890-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B131890-BLK1	ND	ug/L	2.0	2.0	
Carbon disulfide	B131890-BLK1	ND	ug/L	0.50	0.48	
trans-1,4-Dichloro-2-butene	B131890-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B131890-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B131890-BLK1	ND	ug/L	4.0	1.3	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131890						
Ethyl t-butyl ether	B131890-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B131890-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B131890-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B131890-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B131890-BLK1	ND	ug/L	5.0	3.3	
Methyl iodide	B131890-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B131890-BLK1	ND	ug/L	5.0	2.4	
Methyl methacrylate	B131890-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B131890-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B131890-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B131890-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B131890-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B131890-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	**B131890-BLK1**	**102**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B131890-BLK1**	**99.2**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B131890-BLK1**	**100**	%	**80 - 120 (LCL - UCL)**		

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131890										
Benzene	B131890-BS1	LCS	27.070	25.000	ug/L	108		70 - 130		
Bromodichloromethane	B131890-BS1	LCS	24.170	25.000	ug/L	96.7		70 - 130		
Chlorobenzene	B131890-BS1	LCS	21.350	25.000	ug/L	85.4		70 - 130		
Chloroethane	B131890-BS1	LCS	27.090	25.000	ug/L	108		70 - 130		
1,4-Dichlorobenzene	B131890-BS1	LCS	21.350	25.000	ug/L	85.4		70 - 130		
1,1-Dichloroethane	B131890-BS1	LCS	25.440	25.000	ug/L	102		70 - 130		
1,1-Dichloroethene	B131890-BS1	LCS	24.790	25.000	ug/L	99.2		70 - 130		
Toluene	B131890-BS1	LCS	24.880	25.000	ug/L	99.5		70 - 130		
Trichloroethene	B131890-BS1	LCS	23.350	25.000	ug/L	93.4		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B131890-BS1	LCS	10.430	10.000	ug/L	104		75 - 125		
Toluene-d8 (Surrogate)	B131890-BS1	LCS	10.090	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	B131890-BS1	LCS	10.180	10.000	ug/L	102		80 - 120		

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131890	Used client sample: N										
Benzene	MS	2203129-02	ND	27.280	25.000	ug/L		109		70 - 130	
	MSD	2203129-02	ND	26.760	25.000	ug/L	1.9	107	20	70 - 130	
Bromodichloromethane	MS	2203129-02	ND	24.690	25.000	ug/L		98.8		70 - 130	
	MSD	2203129-02	ND	24.240	25.000	ug/L	1.8	97.0	20	70 - 130	
Chlorobenzene	MS	2203129-02	ND	22.180	25.000	ug/L		88.7		70 - 130	
	MSD	2203129-02	ND	21.880	25.000	ug/L	1.4	87.5	20	70 - 130	
Chloroethane	MS	2203129-02	ND	27.560	25.000	ug/L		110		70 - 130	
	MSD	2203129-02	ND	26.760	25.000	ug/L	2.9	107	20	70 - 130	
1,4-Dichlorobenzene	MS	2203129-02	ND	22.240	25.000	ug/L		89.0		70 - 130	
	MSD	2203129-02	ND	22.000	25.000	ug/L	1.1	88.0	20	70 - 130	
1,1-Dichloroethane	MS	2203129-02	ND	25.620	25.000	ug/L		102		70 - 130	
	MSD	2203129-02	ND	25.060	25.000	ug/L	2.2	100	20	70 - 130	
1,1-Dichloroethene	MS	2203129-02	ND	25.150	25.000	ug/L		101		70 - 130	
	MSD	2203129-02	ND	24.550	25.000	ug/L	2.4	98.2	20	70 - 130	
Toluene	MS	2203129-02	ND	25.490	25.000	ug/L		102		70 - 130	
	MSD	2203129-02	ND	24.570	25.000	ug/L	3.7	98.3	20	70 - 130	
Trichloroethene	MS	2203129-02	ND	22.680	25.000	ug/L		90.7		70 - 130	
	MSD	2203129-02	ND	22.000	25.000	ug/L	3.0	88.0	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2203129-02	ND	10.310	10.000	ug/L		103		75 - 125	
	MSD	2203129-02	ND	10.450	10.000	ug/L	1.3	104		75 - 125	
Toluene-d8 (Surrogate)	MS	2203129-02	ND	10.210	10.000	ug/L		102		80 - 120	
	MSD	2203129-02	ND	9.9100	10.000	ug/L	3.0	99.1		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	2203129-02	ND	10.350	10.000	ug/L		104		80 - 120	
	MSD	2203129-02	ND	10.240	10.000	ug/L	1.1	102		80 - 120	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131890						
Chloroacetonitrile	B131890-BLK1	0	ug/L			
1-Chlorobutane	B131890-BLK1	0	ug/L			
1,1-Dichloropropanone	B131890-BLK1	0	ug/L			
Methyl acrylate	B131890-BLK1	0	ug/L			
Nitrobenzene	B131890-BLK1	0	ug/L			
2-Nitropropane	B131890-BLK1	0	ug/L			

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131859						
Total Recoverable Chromium	B131859-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B131900						
Hexavalent Chromium	**B131900-BLK1**	**0.000026000**	**mg/L**	**0.00020**	**0.000020**	**J**

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
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: B131859										
Total Recoverable Chromium	B131859-BS1	LCS	42.638	40.000	ug/L	107		85 - 115		
QC Batch ID: B131900										
Hexavalent Chromium	B131900-BS1	LCS	0.019567	0.020000	mg/L	97.8		90 - 110		

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell 3761 Attucks Drive Powell, OH 43065	**Reported:** 03/24/2022 12:09 Project: JPL- GW Monitoring Wells-CLP Project Number: 1Q22 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: B131859	Used client sample: N										
Total Recoverable Chromium	DUP	2203034-01	ND	ND		ug/L			20		
	MS	2203034-01	ND	37.939	40.000	ug/L		94.8		70 - 130	
	MSD	2203034-01	ND	39.610	40.000	ug/L	4.3	99.0	20	70 - 130	
QC Batch ID: B131900	Used client sample: Y - Description: MW-21-5, 02/09/2022 11:30										
Hexavalent Chromium	DUP	2203057-02	0.0012110	0.0011900		mg/L	1.7		10		
	MS	2203057-02	0.0012110	0.021331	0.020202	mg/L		99.6		90 - 110	
	MSD	2203057-02	0.0012110	0.020737	0.020202	mg/L	2.8	96.7	10	90 - 110	

Torrent LABORATORY, INC.

ANALYTICAL SUMMARY DATA PACKAGE
Level II
SDG # SDGDoD2203007
Project Name: JPL/2203057
Project Location:

SUBMITTAL TO:
Natalie Serda
Pace Analytical Services,Inc
940 S Harney Street
Seattle, Washington 98108

SUBMITTAL BY:
Torrent Laboratory, Inc.
483 Sinclair Frontage Road
Milpitas, CA 95035
Tel (408)263-5258
Fax (408)263-8293

LABORATORY CONTACT PERSON:
Project Manager: KEVANS
Tel (408) 263-5258
Fax (408) 263-2708
Email: pm@torrentlaboratory.com
Original Report Date: 3/18/2022
Report Revision:
Revision Date:

Total Pages: 15

THIS DOCUMENT MEETS DoD QSM 5.3 STANDARDS

The results relate to only the samples associated with the referenced SDG. The submitted data has been produced in accordance with laboratory procedures. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Torrent Laboratory, Inc

Kathie Evans
Project Manager

March 18, 2022
Date

Page 1 of 14

Torrent LABORATORY, INC.

TABLE OF CONTENTS

Torrent LABORATORY, INC.

CASE NARRATIVE

No issues were encountered with receiving, preparation, analysis or reporting of the results associated with this work order.

Analytical Comments for method 314.0
Samples were analyzed past the method recommended holding time of 28 days with client approval.

LAB QUALIFIERS

U - Analyte was not detected and is reported as less than the MDL or as defined by the customer. The MDL has been adjusted for any dilution or concentration of the sample.

J - The reported result is an estimated value (the sample concentration is between the established MDL and the client specified PQL).

B - Blank contamination. The recorded result is associated with a blank with a detected value at greater than 1/2 the PQL.

D - Sample/surrogate spike concentration not reportable due to required dilution of the sample.

E - The reported result is an estimated result. The reported result was outside of the calibration range of the instrument but within linear range.

NR - Not Recoverable. The sample concentration is greater than four times the spike concentration.

Q or S - One or more quality control criteria failed (e.g., LCS recovery, surrogate spike)

Torrent LABORATORY, INC.

Sample Receipt Checklist

Client Name: Pace Analytical Services,Inc
Project Name: JPL
Work Order No.: DoD2203007

Date and Time Received: 3/4/2022
Received By: Emily Ragudo
Physically Logged By: Helena Ueng
Checklist Completed By: Helena Ueng
Carrier Name: GLS

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Applicable

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Applicable
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes			
Container/Temp Blank temperature in compliance?	Yes	Temperature:	3.0	°C
Water-VOA vials have zero headspace?				
Water-pH acceptable upon receipt?	N/A			

pH Checked by: N/A pH Adjusted by: N/A

Comments:

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Torrent LABORATORY, INC.

Login Summary Report

Client ID:	TL5198	Pace Analytical Services,Inc	**TAT Requested:**	10 Day:10
Project Name:	JPL		**Date Received:**	3/4/2022
Project # :	2203057		**Time Received:**	9:37 am
Report Due Date:	3/18/2022			

Comments:

Work Order # : DoD2203007

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
DoD2203007-001A	MW-21-5	02/09/22 11:30	Water	03/26/22			DoD_314.0_W	
Sample Note:	Level 3 report (Not a DoD project, but needs DoD report format) **Samples expire 3/9/22!!							
DoD2203007-002A	MW-21-4	02/09/22 11:00	Water	03/26/22			DoD_314.0_W	
DoD2203007-003A	MW-21-3	02/09/22 12:40	Water	03/26/22			DoD_314.0_W	
DoD2203007-004A	DUP-7-1Q22	02/09/22 13:00	Water	03/26/22			DoD_314.0_W	
DoD2203007-005A	MW-21-2	02/09/22 13:30	Water	03/26/22			DoD_314.0_W	
DoD2203007-006A	EB-8-020922	02/09/22 14:00	Water	03/26/22			DoD_314.0_W	

Torrent LABORATORY, INC.

Chain of Custody

SUBCONTRACT ORDER

BC Laboratories

2203057

DOD220 3007

SENDING LABORATORY:

BC Laboratories
4100 Atlas Ct
Bakersfield, CA 93308
Phone: 661-327-4911
Fax: 661-327-1918
Project Manager: Natalie Serda

RECEIVING LABORATORY:

Torrent Laboratory STRRTL
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone :(408) 263-5258
Fax: (000) 000-0000

DOD

LEVEL III

Analysis	Due	Expires	Laboratory ID	Comments
-001A **Sample ID: 2203057-02**	**Water**	**Sampled:02/09/22 11:30**		**level 3/ MW-21-5**
i314.0w Perchlorate (ug/L)	02/23/22 17:00	03/09/22 11:30		Global ID #0000000000
Containers Supplied:				
-002A **Sample ID: 2203057-03**	**Water**	**Sampled:02/09/22 11:00**		**level 3/ MW-21-4**
i314.0w Perchlorate (ug/L)	02/23/22 17:00	03/09/22 11:00		
Containers Supplied:				
-003A **Sample ID: 2203057-04**	**Water**	**Sampled:02/09/22 12:40**		**level 3/ MW-21-3**
i314.0w Perchlorate (ug/L)	02/23/22 17:00	03/09/22 12:40		
Containers Supplied:				
-004A **Sample ID: 2203057-05**	**Water**	**Sampled:02/09/22 13:00**		**level 3/ DUP-7-IQ22**
i314.0w Perchlorate (ug/L)	02/23/22 17:00	03/09/22 13:00		
Containers Supplied:				
-005A **Sample ID: 2203057-06**	**Water**	**Sampled:02/09/22 13:30**		**level 3/ MW-21-2**
i314.0w Perchlorate (ug/L)	02/23/22 17:00	03/09/22 13:30		
Containers Supplied:				

Released By 3.3.22 Date Received By Date

Released By 3.4.22/9:37 Date Received By 3/4/22 9:37 Date

GLS - Temp=3°C #3

Page 1 of 2

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Torrent LABORATORY, INC.

SUBCONTRACT ORDER

BC Laboratories

2203057

D0 D2203007

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 2203057-07	**Water**	**Sampled:02/09/22 14:00**		**level 3/ EB-8-020922**
i314.0w Perchlorate (ug/L)	02/23/22 17:00	03/09/22 14:00		
Containers Supplied:				

LEVEL III

Released By	Date	Received By	Date
[signature]	3-3-22		
Released By	Date	Received By	Date

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Torrent LABORATORY, INC.

SAMPLE RESULTS DATA

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/04/22, 9:37 am
Date Reported: 03/18/22

Client Sample ID:	MW-21-5	**Lab Sample ID:**	DoD2203007-001A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2203057		
Date/Time Sampled:	02/09/22 / 11:30		
SDG:	SDGDoD2203007		
Tag Number:	2203057-02		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**2.72**	J	ug/L	03/10/22	8:51	PH	464423

Client Sample ID:	MW-21-4	**Lab Sample ID:**	DoD2203007-002A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2203057		
Date/Time Sampled:	02/09/22 / 11:00		
SDG:	SDGDoD2203007		
Tag Number:	2203057-03		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**2.95**	J	ug/L	03/10/22	9:13	PH	464423

Client Sample ID:	MW-21-3	**Lab Sample ID:**	DoD2203007-003A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2203057		
Date/Time Sampled:	02/09/22 / 12:40		
SDG:	SDGDoD2203007		
Tag Number:	2203057-04		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**3.00**	J	ug/L	03/10/22	9:35	PH	464423

Torrent LABORATORY, INC.

Report prepared for: Natalie Serda
Pace Analytical Services,Inc

Date/Time Received: 03/04/22, 9:37 am
Date Reported: 03/18/22

Client Sample ID:	DUP-7-1Q22	**Lab Sample ID:**	DoD2203007-004A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2203057		
Date/Time Sampled:	02/09/22 / 13:00		
SDG:	SDGDoD2203007		
Tag Number:	2203057-05		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**2.94**	J	ug/L	03/10/22	9:57	PH	464423

Client Sample ID:	MW-21-2	**Lab Sample ID:**	DoD2203007-005A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2203057		
Date/Time Sampled:	02/09/22 / 13:30		
SDG:	SDGDoD2203007		
Tag Number:	2203057-06		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	**1.70**	J	ug/L	03/10/22	10:19	PH	464423

Client Sample ID:	EB-8-020922	**Lab Sample ID:**	DoD2203007-006A
Project Name/Location:	JPL	**Sample Matrix:**	Groundwater
Project Number:	2203057		
Date/Time Sampled:	02/09/22 / 14:00		
SDG:	SDGDoD2203007		
Tag Number:	2203057-07		

Prep Method:	314.0WP	**Prep Batch Date/Time:**	3/9/22 6:00:00PM
Prep Batch ID:	1140042	**Prep Analyst:**	PHUFANO

Parameters:	Analysis Method	DF	DL	LOD	LOQ	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Perchlorate	E314.0	1	0.800	2.00	4.00	2.00	U	ug/L	03/10/22	10:41	PH	464423

Torrent LABORATORY, INC.

SAMPLE QC DATA

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	DoD2203007	**Prep Method:**	314.0WP	**Prep Date:**	03/09/22	**Prep Batch:**	1140042
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	18:00	**Analytical Batch:**	464423
Units:	ug/L			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	1140042-MB
Analyzed Date:	3/10/2022	**Analyzed Time:**	3:21	**Analyzed By:**	PH		

Parameters	DL	LOD	LOQ	Method Blank Conc.	Lab Qualifier
Perchlorate	0.800	2.00	4.00	2.00	J

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Torrent LABORATORY, INC.

LCS/LCSD Summary Report

		Prep Method:	314.0WP	**Prep Date:**	03/09/22	**Prep Batch:**	1140042
Matrix:	Water	**Analytical Method:**	E314.0	**Prep Time:**	18:00	**Analytical Batch:**	464423
Units:	ug/L			**Prep Analyst:**	PHUFANO	**Lab Sample ID:**	1140042-LCSD
Analyzed Date:	3/10/2022	**Analyzed Time:**	4:05	**Analyzed By:**	PH		

Parameters	Spike Conc.	LCS % Recovery	LCSD % Recovery	% Recovery Limits	LCS/LCSD % RPD	% RPD Limits	Lab Qualifier
Perchlorate	50	98.7	99.1	84 - 119	0.404	15	

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End of Level II Report for SDG SDGDoD2203007

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 12:09
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Notes And Definitions

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

Date of Report: 03/24/2022

David Conner

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Client Project:	1Q22
BCL Project:	JPL- GW Monitoring Wells-CLP
BCL Work Order:	2203252
Invoice ID:	

Enclosed are the results of analyses for samples received by the laboratory on 2/10/2022. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1001276734

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Operations Manager

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

Table of Contents

BC Laboratories, Inc.

Chain of Custody Form

*Required Fields 22-03252

Page 1 of 1

Report To:
Client:* Tidewater, Inc.
Attn:* David Conner
Street Address:* 3761 Attucks Drive
City:* Powell State:* OH Zip:* 43065
Phone#:* (626) 298 - 5715 Fax#: (614) 792 - 2897
Email Address: david.conner@tideh2o.net
Submission #:

Project Description:* JPL-GW Monitoring
Project Code:* 4Q21
Sampler (s):* Blaine Tech
[signature]

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

Analysis Requested

Sample #	Sample Description	Date	Time	Matrix*	VOCs EPA 524.2	TRM: Cr	Perchlorate	Hexavalent Cr6 -218.6 (mg/L)	Cl, NO3, NO2, SO4	Orthophosphate 365.1				Notes
-1	TB-9-021022	2/10/22	0900	W	X									
-2	MW-15	↓	1047	↓		X		X						MS/MSD + level IV

CHK BY: PPB DISTRIBUTION: WO JKR MT SUB-OUT ☐

2/10 SHORT HOLDING TIME
(Cr6) 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: ________

Relinquished By	Date	Time	Received By	Date	Time
1. [signature]	2/10/22	1300	1. [signature]	2/10/22	1300
2. [signature]	2/10/22	2000	2. [signature]	2/10/22	2000
3.			3.		

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

Chain of Custody and Cooler Receipt Form for 2203252 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 22-03252

SHIPPING INFORMATION
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

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

FREE LIQUID
YES ☐ NO ☐
W / S

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

Custody Seals: Ice Chest ☐ 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: 0.98 Container: PE Thermometer ID: 274

Temperature: (A) 1.4 °C / (C) 1.1 °C

Date/Time 2/10/22 2000

Analyst Init PEC

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6		A,B								
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz		C,D								
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL										
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL - 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:_____

Sample Numbering Completed By: PEC Date/Time: 2/14/22 1300

A = Actual / C = Corrected

Rev 22 04/13/21

[S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 22]

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 10:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2203252-01	**COC Number:**	---	**Receive Date:**	02/10/2022 20:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/10/2022 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-9-021022	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-9-021022	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
2203252-02	**COC Number:**	---	**Receive Date:**	02/10/2022 20:00
	Project Number:	NASA/JPL	**Sampling Date:**	02/10/2022 10:47
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-15	**Lab Matrix:**	Water
	Sampled By:	BTST	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 10:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203252-01 | **Client Sample Name:** NASA/JPL, TB-9-021022, 2/10/2022 9:00:00AM

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

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 10:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203252-01 | **Client Sample Name:** NASA/JPL, TB-9-021022, 2/10/2022 9:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.23	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.21	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.78	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Acetone	ND	ug/L	10	6.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.47	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	2.0	2.0	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.8	EPA-524.2	ND		1

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 10:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 2203252-01 | **Client Sample Name:** NASA/JPL, TB-9-021022, 2/10/2022 9:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Diethyl ether	ND	ug/L	2.0	0.33	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	1.3	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.32	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	5.0	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	2.3	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	5.0	3.3	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	1.1	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	5.0	2.4	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.63	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	6.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.34	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/16/22 00:11	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

Pace Analytical
ENVIRONMENTAL SCIENCES

Tidewater Inc. - Powell
3761 Attucks Drive
Powell, OH 43065

Reported: 03/24/2022 10:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 2203252-01 | **Client Sample Name:** NASA/JPL, TB-9-021022, 2/10/2022 9:00:00AM

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

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-524.2	02/15/22 12:40	02/16/22 00:11	MGC	MS-V5	1	B131890	EPA 524.2

DCN = Data Continuation Number

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Reported: 03/24/2022 10:46
Project: JPL- GW Monitoring Wells-CLP
Project Number: 1Q22
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 2203252-02 | **Client Sample Name:** NASA/JPL, MW-15, 2/10/2022 10:47:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Hexavalent Chromium	**0.00069**	**mg/L**	**0.00020**	**0.000020**	**EPA-218.6**	ND		1
Total Recoverable Chromium	**3.5**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-218.6	02/16/22 01:00	02/16/22 07:50	SAV	IC-4	1	B131990	No Prep
2	EPA-200.8	02/15/22 20:00	02/16/22 13:44	KHS	PE-EL2	1	B131934	EPA 200.2

DCN = Data Continuation Number

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Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B131890						
Benzene	B131890-BLK1	ND	ug/L	0.50	0.11	
Bromobenzene	B131890-BLK1	ND	ug/L	0.50	0.15	
Bromochloromethane	B131890-BLK1	ND	ug/L	0.50	0.27	
Bromodichloromethane	B131890-BLK1	ND	ug/L	0.50	0.20	
Bromoform	B131890-BLK1	ND	ug/L	0.50	0.46	
Bromomethane	B131890-BLK1	ND	ug/L	0.50	0.20	
n-Butylbenzene	B131890-BLK1	ND	ug/L	0.50	0.15	
sec-Butylbenzene	B131890-BLK1	ND	ug/L	0.50	0.13	
tert-Butylbenzene	B131890-BLK1	ND	ug/L	0.50	0.18	
Carbon tetrachloride	B131890-BLK1	ND	ug/L	0.50	0.17	
Chlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.14	
Chloroethane	B131890-BLK1	ND	ug/L	0.50	0.17	
Chloroform	B131890-BLK1	ND	ug/L	0.50	0.14	
Chloromethane	B131890-BLK1	ND	ug/L	0.50	0.11	
2-Chlorotoluene	B131890-BLK1	ND	ug/L	0.50	0.14	
4-Chlorotoluene	B131890-BLK1	ND	ug/L	0.50	0.093	
Dibromochloromethane	B131890-BLK1	ND	ug/L	0.50	0.22	
1,2-Dibromo-3-chloropropane	B131890-BLK1	ND	ug/L	1.0	0.89	
1,2-Dibromoethane	B131890-BLK1	ND	ug/L	0.50	0.22	
Dibromomethane	B131890-BLK1	ND	ug/L	0.50	0.23	
1,2-Dichlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.21	
1,3-Dichlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.16	
1,4-Dichlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.15	
Dichlorodifluoromethane	B131890-BLK1	ND	ug/L	0.50	0.15	
1,1-Dichloroethane	B131890-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloroethane	B131890-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	B131890-BLK1	ND	ug/L	0.50	0.27	
cis-1,2-Dichloroethene	B131890-BLK1	ND	ug/L	0.50	0.27	
trans-1,2-Dichloroethene	B131890-BLK1	ND	ug/L	0.50	0.17	
1,2-Dichloropropane	B131890-BLK1	ND	ug/L	0.50	0.15	
1,3-Dichloropropane	B131890-BLK1	ND	ug/L	0.50	0.13	
2,2-Dichloropropane	B131890-BLK1	ND	ug/L	0.50	0.18	
1,1-Dichloropropene	B131890-BLK1	ND	ug/L	0.50	0.19	
cis-1,3-Dichloropropene	B131890-BLK1	ND	ug/L	0.50	0.14	

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Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B131890						
trans-1,3-Dichloropropene	B131890-BLK1	ND	ug/L	0.50	0.13	
Ethylbenzene	B131890-BLK1	ND	ug/L	0.50	0.15	
Hexachlorobutadiene	B131890-BLK1	ND	ug/L	0.50	0.20	
Isopropylbenzene	B131890-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	B131890-BLK1	ND	ug/L	0.50	0.14	
Methylene chloride	B131890-BLK1	ND	ug/L	0.50	0.21	
Methyl t-butyl ether	B131890-BLK1	ND	ug/L	0.50	0.14	
Naphthalene	B131890-BLK1	ND	ug/L	0.50	0.16	
n-Propylbenzene	B131890-BLK1	ND	ug/L	0.50	0.12	
Styrene	B131890-BLK1	ND	ug/L	0.50	0.12	
1,1,1,2-Tetrachloroethane	B131890-BLK1	ND	ug/L	0.50	0.21	
1,1,2,2-Tetrachloroethane	B131890-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	B131890-BLK1	ND	ug/L	0.50	0.23	
Toluene	B131890-BLK1	ND	ug/L	0.50	0.17	
1,2,3-Trichlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trichlorobenzene	B131890-BLK1	ND	ug/L	0.50	0.15	
1,1,1-Trichloroethane	B131890-BLK1	ND	ug/L	0.50	0.21	
1,1,2-Trichloroethane	B131890-BLK1	ND	ug/L	0.50	0.21	
Trichloroethene	B131890-BLK1	ND	ug/L	0.50	0.19	
Trichlorofluoromethane	B131890-BLK1	ND	ug/L	0.50	0.14	
1,2,3-Trichloropropane	B131890-BLK1	ND	ug/L	1.0	0.78	
1,1,2-Trichloro-1,2,2-trifluoroethane	B131890-BLK1	ND	ug/L	0.50	0.19	
1,2,4-Trimethylbenzene	B131890-BLK1	ND	ug/L	0.50	0.17	
1,3,5-Trimethylbenzene	B131890-BLK1	ND	ug/L	0.50	0.14	
Vinyl chloride	B131890-BLK1	ND	ug/L	0.50	0.18	
Acetone	B131890-BLK1	ND	ug/L	10	6.6	
Acrylonitrile	B131890-BLK1	ND	ug/L	5.0	1.5	
Allyl chloride	B131890-BLK1	ND	ug/L	5.0	0.47	
t-Amyl Methyl ether	B131890-BLK1	ND	ug/L	0.50	0.19	
t-Butyl alcohol	B131890-BLK1	ND	ug/L	2.0	2.0	
Carbon disulfide	B131890-BLK1	ND	ug/L	0.50	0.48	
trans-1,4-Dichloro-2-butene	B131890-BLK1	ND	ug/L	5.0	1.8	
Diethyl ether	B131890-BLK1	ND	ug/L	2.0	0.33	
Ethyl methacrylate	B131890-BLK1	ND	ug/L	4.0	1.3	

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Volatile Organic Analysis (EPA Method 524.2)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B131890						
Ethyl t-butyl ether	B131890-BLK1	ND	ug/L	0.50	0.32	
Hexachloroethane	B131890-BLK1	ND	ug/L	0.50	0.11	
2-Hexanone	B131890-BLK1	ND	ug/L	10	5.0	
Methacrylonitrile	B131890-BLK1	ND	ug/L	10	2.3	
Methyl ethyl ketone	B131890-BLK1	ND	ug/L	5.0	3.3	
Methyl iodide	B131890-BLK1	ND	ug/L	2.0	1.1	
Methyl isobutyl ketone	B131890-BLK1	ND	ug/L	5.0	2.4	
Methyl methacrylate	B131890-BLK1	ND	ug/L	5.0	1.2	
Pentachloroethane	B131890-BLK1	ND	ug/L	2.0	0.63	
Propionitrile	B131890-BLK1	ND	ug/L	20	6.2	
Tetrahydrofuran	B131890-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	B131890-BLK1	ND	ug/L	0.50	0.34	
o-Xylene	B131890-BLK1	ND	ug/L	0.50	0.13	
1,2-Dichloroethane-d4 (Surrogate)	**B131890-BLK1**	**102**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B131890-BLK1**	**99.2**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B131890-BLK1**	**100**	%	**80 - 120 (LCL - UCL)**		

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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: B131890										
Benzene	B131890-BS1	LCS	27.070	25.000	ug/L	108		70 - 130		
Bromodichloromethane	B131890-BS1	LCS	24.170	25.000	ug/L	96.7		70 - 130		
Chlorobenzene	B131890-BS1	LCS	21.350	25.000	ug/L	85.4		70 - 130		
Chloroethane	B131890-BS1	LCS	27.090	25.000	ug/L	108		70 - 130		
1,4-Dichlorobenzene	B131890-BS1	LCS	21.350	25.000	ug/L	85.4		70 - 130		
1,1-Dichloroethane	B131890-BS1	LCS	25.440	25.000	ug/L	102		70 - 130		
1,1-Dichloroethene	B131890-BS1	LCS	24.790	25.000	ug/L	99.2		70 - 130		
Toluene	B131890-BS1	LCS	24.880	25.000	ug/L	99.5		70 - 130		
Trichloroethene	B131890-BS1	LCS	23.350	25.000	ug/L	93.4		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B131890-BS1	LCS	10.430	10.000	ug/L	104		75 - 125		
Toluene-d8 (Surrogate)	B131890-BS1	LCS	10.090	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	B131890-BS1	LCS	10.180	10.000	ug/L	102		80 - 120		

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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: B131890	Used client sample: N										
Benzene	MS	2203129-02	ND	27.280	25.000	ug/L		109		70 - 130	
	MSD	2203129-02	ND	26.760	25.000	ug/L	1.9	107	20	70 - 130	
Bromodichloromethane	MS	2203129-02	ND	24.690	25.000	ug/L		98.8		70 - 130	
	MSD	2203129-02	ND	24.240	25.000	ug/L	1.8	97.0	20	70 - 130	
Chlorobenzene	MS	2203129-02	ND	22.180	25.000	ug/L		88.7		70 - 130	
	MSD	2203129-02	ND	21.880	25.000	ug/L	1.4	87.5	20	70 - 130	
Chloroethane	MS	2203129-02	ND	27.560	25.000	ug/L		110		70 - 130	
	MSD	2203129-02	ND	26.760	25.000	ug/L	2.9	107	20	70 - 130	
1,4-Dichlorobenzene	MS	2203129-02	ND	22.240	25.000	ug/L		89.0		70 - 130	
	MSD	2203129-02	ND	22.000	25.000	ug/L	1.1	88.0	20	70 - 130	
1,1-Dichloroethane	MS	2203129-02	ND	25.620	25.000	ug/L		102		70 - 130	
	MSD	2203129-02	ND	25.060	25.000	ug/L	2.2	100	20	70 - 130	
1,1-Dichloroethene	MS	2203129-02	ND	25.150	25.000	ug/L		101		70 - 130	
	MSD	2203129-02	ND	24.550	25.000	ug/L	2.4	98.2	20	70 - 130	
Toluene	MS	2203129-02	ND	25.490	25.000	ug/L		102		70 - 130	
	MSD	2203129-02	ND	24.570	25.000	ug/L	3.7	98.3	20	70 - 130	
Trichloroethene	MS	2203129-02	ND	22.680	25.000	ug/L		90.7		70 - 130	
	MSD	2203129-02	ND	22.000	25.000	ug/L	3.0	88.0	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	2203129-02	ND	10.310	10.000	ug/L		103		75 - 125	
	MSD	2203129-02	ND	10.450	10.000	ug/L	1.3	104		75 - 125	
Toluene-d8 (Surrogate)	MS	2203129-02	ND	10.210	10.000	ug/L		102		80 - 120	
	MSD	2203129-02	ND	9.9100	10.000	ug/L	3.0	99.1		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	2203129-02	ND	10.350	10.000	ug/L		104		80 - 120	
	MSD	2203129-02	ND	10.240	10.000	ug/L	1.1	102		80 - 120	

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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: B131890						
Chloroacetonitrile	B131890-BLK1	0	ug/L			
1-Chlorobutane	B131890-BLK1	0	ug/L			
1,1-Dichloropropanone	B131890-BLK1	0	ug/L			
Methyl acrylate	B131890-BLK1	0	ug/L			
Nitrobenzene	B131890-BLK1	0	ug/L			
2-Nitropropane	B131890-BLK1	0	ug/L			

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Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B131934						
Total Recoverable Chromium	B131934-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: B131990						
Hexavalent Chromium	B131990-BLK1	ND	mg/L	0.00020	0.000020	

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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: B131934										
Total Recoverable Chromium	B131934-BS1	LCS	41.396	40.000	ug/L	103		85 - 115		
QC Batch ID: B131990										
Hexavalent Chromium	B131990-BS1	LCS	0.019570	0.020000	mg/L	97.8		90 - 110		

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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: B131934	Used client sample: Y - Description: MW-15, 02/10/2022 10:47										
Total Recoverable Chromium	DUP	**2203252-02**	**3.4610**	**4.6170**		**ug/L**	**28.6**		**20**		**A02**
	MS	**2203252-02**	**3.4610**	**49.036**	**40.000**	**ug/L**		**114**		**70 - 130**	
	MSD	**2203252-02**	**3.4610**	**44.459**	**40.000**	**ug/L**	**9.8**	**102**	**20**	**70 - 130**	
QC Batch ID: B131990	Used client sample: Y - Description: MW-15, 02/10/2022 10:47										
Hexavalent Chromium	DUP	2203252-02	0.00068800	0.00067800		mg/L	1.5		10		
	MS	2203252-02	0.00068800	0.020109	0.020202	mg/L		96.1		90 - 110	
	MSD	2203252-02	0.00068800	0.020202	0.020202	mg/L	0.5	96.6	10	90 - 110	

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Notes And Definitions

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