ATTACHMENT 3 PART 1: LABORATORY ANALYTICAL REPORTS

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

BC LABORATORIES, INC.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/15/2013

David Conner

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Project:	JPL- GW Monitoring Wells
BC Work Order:	1308175
Invoice ID:	B146162

Enclosed are the results of analyses for samples received by the laboratory on 4/22/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

Report & Bill to:

Name:	Battelle MHTS	Phone: (614) 458-5489
Address:	505 King Ave.	Project: 2Q13 JPL
City:	Columbus	Project #:
State: OH	ZIP: 43201	Samplers Name: Andy Wolff
Attn:	David Conner	13-08175

Analysis Requested

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7199A)	NOTES
-1	TB-1-4/22/13	4-22-13	0806	AQ	X	~~X~~														
-2	SB-1-4/22/13		0900		X	X	X	X	X	X	X	X	X	X	X	X			X	
-3	EB-1-4/22/13		0910		X	X	X	X	X	X	X	X	X	X	X	X			X	
-4	MW-20-5		1000		X	X	X	X	X	X	X	X	X	X	X	X			X	
-5	MW-20-4		1035		X	X	X	X	X	X	X	X	X	X	X	X			X	
-6	MW-20-3		1110		X	X	X	X	X	X	X	X	X	X	X	X			X	Level IV
-7	MW-20-2		1200		X	X	X	X	X	X	X	X	X	X	X	X			X	
-8	MW-20-1		1230		X	X	X	X	X	X	X	X	X	X	X	X			X	MS/MSD
-9	MW-19-5		1350		X	X	X	X	X	X	X	X	X	X	X	X			X	
-10	MW-19-4		1420		X	X	X	X	X	X	X	X	X	X	X	X			X	
-11	MW-19-3		1450		X	X	X	X	X	X	X	X	X	X	X	X			X	
-12	DUP-1-4/22/13	↓	1115	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	

Relinquished by: (Signature)	Received By:	Date & Time
[signature]	Nicole	4/22/13 17?05
Nicole	[signature]	4-22-13 1705
[signature]	KQL	4-22-13 2100

CHK BY: KIQ
DISTRIBUTION
SUB OUT ☐

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

Chain of Custody and Cooler Receipt Form for 1308175 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 08/17/12 Page __ Of __

Submission #: 13-08175

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

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

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

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

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

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: Qtpe Thermometer ID: 207 Date/Time 4-22-13

Temperature: (A) 3.1 °C / (C) 3.0 °C Analyst Init KIQ

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL		B	B	B	B	B	B	B	B	B
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		C	C	C	C	C	C	C	C	C
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A(1)									
40ml VOA VIAL		A,3)	A,3)	A,3)	A,3)	A,3)	A,3)	A (4) KK	A,3)	A,3)
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										

Comments:_____

Sample Numbering Completed By: KIQ Date/Time: 4/22/13 @ 2245

( ) = Actual / [ ] = Corrected

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Chain of Custody and Cooler Receipt Form for 1308175 Page 3 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 08/17/12 Page __ Of __

Submission #: 13-08175

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

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

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

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

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

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: Qtpe Thermometer ID: 207

Temperature: (A) 3.1 °C / (C) 3.0 °C

Date/Time 4-22-13

Analyst Init KIO

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL	B	B								
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C	C								
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
IA PHENOLICS										
0ml VOA VIAL TRAVEL BLANK										
0ml VOA VIAL	A	A								
PT EPA 413.1, 413.2, 418.1										
T ODOR										
ADIOLOGICAL										
ACTERIOLOGICAL										
0 ml VOA VIAL- 504										
T EPA 508/608/8080										
T EPA 515.1/8150										
T EPA 525										
T EPA 525 TRAVEL BLANK										
0ml EPA 547										
0ml EPA 531.1										
T EPA 548										
T EPA 549										
T EPA 632										
T EPA 8015M										
T AMBER										
OZ. JAR										
OZ. JAR										
OIL SLEEVE										
B VIAL										
ASTIC BAG										
RROUS IRON										
SCORE										
IART KIT										

Comments:_____

Sample Numbering Completed By: KIO Date/Time: 4/22/13 @ 2245

A = Actual / C = Corrected

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308175-01	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 08:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-1-42213	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-1-42213	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308175-02	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-1-42213	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): SB-1-42213	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308175-03	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 09:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-1-42213	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-1-42213	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308175-04	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 10:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-5	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308175-05	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 10:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-4	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308175-06	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 11:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-3	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308175-07	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 12:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-2	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308175-08	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 12:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-20-1	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-20-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308175-09	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 13:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-5	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308175-10	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 14:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-4	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308175-11	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 14:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-3	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308175-12	**COC Number:**	---	**Receive Date:**	04/22/2013 21:00
	Project Number:	JPL-GW	**Sampling Date:**	04/22/2013 11:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-1-2Q13	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-1-2Q13	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-01 | **Client Sample Name:** JPL-GW, TB-1-42213, 4/22/2013 8:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-01 | **Client Sample Name:** JPL-GW, TB-1-42213, 4/22/2013 8:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-01 | **Client Sample Name:** JPL-GW, TB-1-42213, 4/22/2013 8:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 12:34	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-01 | **Client Sample Name:** JPL-GW, TB-1-42213, 4/22/2013 8:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 12:34	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-02 | **Client Sample Name:** JPL-GW, SB-1-42213, 4/22/2013 9:00:00AM, Andy Wolff

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

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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-02 | **Client Sample Name:** JPL-GW, SB-1-42213, 4/22/2013 9:00:00AM, Andy Wolff

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

Battelle MHTS
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-02 | **Client Sample Name:** JPL-GW, SB-1-42213, 4/22/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 12:57	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-02 | **Client Sample Name:** JPL-GW, SB-1-42213, 4/22/2013 9:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 12:57	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308175-02 | **Client Sample Name:** JPL-GW, SB-1-42213, 4/22/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**0.039**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND	**J**	1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	ND	mg/L	0.50	0.17	EPA-200.7	ND		1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.14**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND	**J**	3
Nitrate as N	ND	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	**0.40**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**J**	3
pH	**6.00**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	2.5	2.5	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/26/13	04/26/13 16:07	JRG	PE-OP2	1	BWD2092
2	SM-2320B	04/25/13	04/25/13 12:47	RML	MET-1	1	BWD2045
3	EPA-300.0	04/22/13	04/23/13 01:41	LD1	IC1	1	BWD1804
4	EPA-150.1	04/25/13	04/25/13 12:47	RML	MET-1	1	BWD2045
5	EPA-160.1	04/23/13	04/23/13 07:55	NW1	MANUAL	0.250	BWD1767
6	EPA-353.2	04/23/13	04/23/13 08:31	TDC	KONE-1	1	BWD1773
7	EPA-314.0	04/30/13	04/30/13 17:41	LS1	IC6	1	BWE0002

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308175-02 | **Client Sample Name:** JPL-GW, SB-1-42213, 4/22/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**6.5**	**ug/L**	**50**	**6.5**	**EPA-200.7**	6.8	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/13	04/23/13 00:20	LS1	KONE-1	1	BWD1775
2	EPA-200.8	04/26/13	04/29/13 19:17	SRM	PE-EL2	1	BWD2094
3	EPA-200.7	04/26/13	04/26/13 16:07	JRG	PE-OP2	1	BWD2092

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-03 | **Client Sample Name:** JPL-GW, EB-1-42213, 4/22/2013 9:10:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-03 | **Client Sample Name:** JPL-GW, EB-1-42213, 4/22/2013 9:10:00AM, Andy Wolff

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

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Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-03 | **Client Sample Name:** JPL-GW, EB-1-42213, 4/22/2013 9:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 13:20	MGC	MS-V5	1	BWD2198

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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-03 | **Client Sample Name:** JPL-GW, EB-1-42213, 4/22/2013 9:10:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 13:20	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308175-03 | **Client Sample Name:** JPL-GW, EB-1-42213, 4/22/2013 9:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**0.035**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND	**J**	1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	ND	mg/L	0.50	0.17	EPA-200.7	ND		1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.16**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND	**J**	3
Nitrate as N	ND	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	ND	mg/L	1.0	0.13	EPA-300.0	ND		3
pH	**5.88**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	2.5	2.5	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/26/13	04/26/13 16:17	JRG	PE-OP2	1	BWD2092
2	SM-2320B	04/25/13	04/25/13 12:57	RML	MET-1	1	BWD2045
3	EPA-300.0	04/22/13	04/23/13 01:54	LD1	IC1	1	BWD1804
4	EPA-150.1	04/25/13	04/25/13 12:57	RML	MET-1	1	BWD2045
5	EPA-160.1	04/23/13	04/23/13 07:55	NW1	MANUAL	0.250	BWD1767
6	EPA-353.2	04/23/13	04/23/13 08:31	TDC	KONE-1	1	BWD1773
7	EPA-314.0	04/30/13	04/30/13 17:55	LS1	IC6	1	BWE0002

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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308175-03 | **Client Sample Name:** JPL-GW, EB-1-42213, 4/22/2013 9:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**19**	**ug/L**	**50**	**6.5**	**EPA-200.7**	6.8	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/13	04/23/13 00:20	LS1	KONE-1	1	BWD1775
2	EPA-200.8	04/26/13	04/29/13 19:20	SRM	PE-EL2	1	BWD2094
3	EPA-200.7	04/26/13	04/26/13 16:17	JRG	PE-OP2	1	BWD2092

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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-04 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2013 10:00:00AM, Andy Wolff

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

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505 King Ave.
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-04 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2013 10:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-04 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2013 10:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 13:42	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-04 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2013 10:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 13:42	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308175-04 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2013 10:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**6.6**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**2.0**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**56**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.4**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**130**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**11**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**130**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**8.2**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**0.038**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND	**J**	3
Sulfate	**5.8**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.87**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**200**	**mg/L**	**10**	**10**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/26/13	04/26/13 16:20	JRG	PE-OP2	1	BWD2092
2	SM-2320B	04/25/13	04/25/13 13:02	RML	MET-1	1	BWD2045
3	EPA-300.0	04/22/13	04/23/13 02:08	LD1	IC1	1	BWD1804
4	EPA-150.1	04/25/13	04/25/13 13:02	RML	MET-1	1	BWD2045
5	EPA-160.1	04/23/13	04/23/13 08:40	NW1	MANUAL	1	BWD1769
6	EPA-353.2	04/23/13	04/23/13 08:31	TDC	KONE-1	1	BWD1773
7	EPA-314.0	04/30/13	04/30/13 18:08	LS1	IC6	1	BWE0002

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308175-04 | **Client Sample Name:** JPL-GW, MW-20-5, 4/22/2013 10:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**28**	**ug/L**	**50**	**6.5**	**EPA-200.7**	6.8	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/13	04/23/13 00:20	LS1	KONE-1	1	BWD1775
2	EPA-200.8	04/26/13	04/29/13 19:24	SRM	PE-EL2	1	BWD2094
3	EPA-200.7	04/26/13	04/26/13 16:20	JRG	PE-OP2	1	BWD2092

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-05 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2013 10:35:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-05 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2013 10:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.57**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-05 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2013 10:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 14:05	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-05 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2013 10:35:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 14:05	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308175-05 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2013 10:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**6.9**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**2.5**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**59**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**0.78**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND	**J**	1
Bicarbonate	**120**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**17**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**130**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**9.5**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	**8.3**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**9.20**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**190**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/26/13	04/26/13 16:22	JRG	PE-OP2	1	BWD2092
2	SM-2320B	04/25/13	04/25/13 13:08	RML	MET-1	1	BWD2045
3	EPA-300.0	04/22/13	04/23/13 02:21	LD1	IC1	1	BWD1804
4	EPA-150.1	04/25/13	04/25/13 13:08	RML	MET-1	1	BWD2045
5	EPA-160.1	04/23/13	04/23/13 08:40	NW1	MANUAL	2	BWD1769
6	EPA-353.2	04/23/13	04/23/13 08:52	TDC	KONE-1	1	BWD1773
7	EPA-314.0	04/30/13	04/30/13 18:21	LS1	IC6	1	BWE0002

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308175-05 | **Client Sample Name:** JPL-GW, MW-20-4, 4/22/2013 10:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.8**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.8**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**52**	**ug/L**	**50**	**6.5**	**EPA-200.7**	6.8		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/13	04/23/13 00:20	LS1	KONE-1	1	BWD1775
2	EPA-200.8	04/26/13	04/29/13 19:27	SRM	PE-EL2	1	BWD2094
3	EPA-200.7	04/26/13	04/26/13 16:22	JRG	PE-OP2	1	BWD2092

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-06 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2013 11:10:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-06 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2013 11:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	**0.14**	**ug/L**	**0.50**	**0.098**	**EPA-524.2**	ND	**J**	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.41**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.20**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	**0.13**	**ug/L**	**0.50**	**0.093**	**EPA-524.2**	ND	**J**	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.28**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	**2.5**	**ug/L**	**5.0**	**1.2**	**EPA-524.2**	ND	**J**	1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.64**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-06 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2013 11:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 14:27	MGC	MS-V5	1	BWD2198

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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-06 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2013 11:10:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 14:27	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308175-06 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2013 11:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**6.1**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**6.6**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**49**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**88**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**16**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**98**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**39**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**0.27**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**3.4**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**9.22**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**180**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/26/13	04/26/13 16:25	JRG	PE-OP2	1	BWD2092
2	SM-2320B	04/25/13	04/25/13 13:15	RML	MET-1	1	BWD2045
3	EPA-300.0	04/22/13	04/23/13 03:02	LD1	IC1	1	BWD1804
4	EPA-150.1	04/25/13	04/25/13 13:15	RML	MET-1	1	BWD2045
5	EPA-160.1	04/23/13	04/23/13 08:40	NW1	MANUAL	2	BWD1769
6	EPA-353.2	04/23/13	04/23/13 08:52	TDC	KONE-1	1	BWD1773
7	EPA-314.0	04/30/13	04/30/13 18:34	LS1	IC6	1	BWE0002

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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308175-06 | **Client Sample Name:** JPL-GW, MW-20-3, 4/22/2013 11:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**0.96**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**37**	**ug/L**	**50**	**6.5**	**EPA-200.7**	6.8	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/13	04/23/13 00:26	LS1	KONE-1	1	BWD1775
2	EPA-200.8	04/26/13	04/29/13 19:30	SRM	PE-EL2	1	BWD2094
3	EPA-200.7	04/26/13	04/26/13 16:25	JRG	PE-OP2	1	BWD2092

Battelle MHTS
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-07 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2013 12:00:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.22**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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505 King Ave.
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-07 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2013 12:00:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.17**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.66**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.43**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-07 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2013 12:00:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 14:50	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-07 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2013 12:00:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 14:50	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308175-07 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2013 12:00:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**53**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**22**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**17**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**23**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**2.9**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**40**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.14**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**310**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.9**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/26/13	04/26/13 16:27	JRG	PE-OP2	1	BWD2092
2	SM-2320B	04/25/13	04/25/13 13:20	RML	MET-1	1	BWD2045
3	EPA-300.0	04/22/13	04/23/13 03:16	LD1	IC1	1	BWD1804
4	EPA-150.1	04/25/13	04/25/13 13:20	RML	MET-1	1	BWD2045
5	EPA-160.1	04/23/13	04/23/13 08:40	NW1	MANUAL	2	BWD1769
6	EPA-353.2	04/23/13	04/23/13 08:52	TDC	KONE-1	1	BWD1773
7	EPA-314.0	04/30/13	04/30/13 18:48	LS1	IC6	1	BWE0002

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308175-07 | **Client Sample Name:** JPL-GW, MW-20-2, 4/22/2013 12:00:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**0.73**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**20**	**ug/L**	**50**	**6.5**	**EPA-200.7**	6.8	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/13	04/23/13 00:26	LS1	KONE-1	1	BWD1775
2	EPA-200.8	04/26/13	04/29/13 19:33	SRM	PE-EL2	1	BWD2094
3	EPA-200.7	04/26/13	04/26/13 16:27	JRG	PE-OP2	1	BWD2092

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-08 | **Client Sample Name:** JPL-GW, MW-20-1, 4/22/2013 12:30:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**0.19**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.44**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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505 King Ave.
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-08 | **Client Sample Name:** JPL-GW, MW-20-1, 4/22/2013 12:30:00PM, Andy Wolff

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

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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-08 | **Client Sample Name:** JPL-GW, MW-20-1, 4/22/2013 12:30:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 10:19	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-08 | **Client Sample Name:** JPL-GW, MW-20-1, 4/22/2013 12:30:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 10:19	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308175-08 | **Client Sample Name:** JPL-GW, MW-20-1, 4/22/2013 12:30:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**69**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**23**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**19**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**33**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**3.9**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**68**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**7.88**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**390**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/26/13	04/26/13 15:52	JRG	PE-OP2	1	BWD2092
2	SM-2320B	04/25/13	04/25/13 13:26	RML	MET-1	1	BWD2045
3	EPA-300.0	04/22/13	04/23/13 00:47	LD1	IC1	1	BWD1804
4	EPA-150.1	04/25/13	04/25/13 13:26	RML	MET-1	1	BWD2045
5	EPA-160.1	04/23/13	04/23/13 08:40	NW1	MANUAL	2	BWD1769
6	EPA-353.2	04/23/13	04/23/13 08:46	TDC	KONE-1	1	BWD1773
7	EPA-314.0	04/30/13	04/30/13 19:01	LS1	IC6	1	BWE0003

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308175-08 | **Client Sample Name:** JPL-GW, MW-20-1, 4/22/2013 12:30:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**76**	**ug/L**	**50**	**6.5**	**EPA-200.7**	6.8		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/13	04/23/13 00:20	LS1	KONE-1	1	BWD1775
2	EPA-200.8	04/26/13	04/29/13 18:52	SRM	PE-EL2	1	BWD2094
3	EPA-200.7	04/26/13	04/26/13 15:52	JRG	PE-OP2	1	BWD2092

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-09 | **Client Sample Name:** JPL-GW, MW-19-5, 4/22/2013 1:50:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-09 | **Client Sample Name:** JPL-GW, MW-19-5, 4/22/2013 1:50:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.71**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.16**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.39**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-09 | **Client Sample Name:** JPL-GW, MW-19-5, 4/22/2013 1:50:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 15:13	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-09 | **Client Sample Name:** JPL-GW, MW-19-5, 4/22/2013 1:50:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 15:13	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308175-09 | **Client Sample Name:** JPL-GW, MW-19-5, 4/22/2013 1:50:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**64**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**29**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**32**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**220**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**51**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**8.4**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**52**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.11**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**420**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/26/13	04/26/13 16:30	JRG	PE-OP2	1	BWD2092
2	SM-2320B	04/25/13	04/25/13 13:32	RML	MET-1	1	BWD2045
3	EPA-300.0	04/22/13	04/23/13 03:29	LD1	IC1	1	BWD1804
4	EPA-150.1	04/25/13	04/25/13 13:32	RML	MET-1	1	BWD2045
5	EPA-160.1	04/23/13	04/23/13 08:40	NW1	MANUAL	2	BWD1769
6	EPA-353.2	04/23/13	04/23/13 08:52	TDC	KONE-1	1	BWD1773
7	EPA-314.0	04/30/13	04/30/13 19:41	LS1	IC6	1	BWE0003

Battelle MHTS
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308175-09 | **Client Sample Name:** JPL-GW, MW-19-5, 4/22/2013 1:50:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.1**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**34**	**ug/L**	**50**	**6.5**	**EPA-200.7**	6.8	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/13	04/23/13 00:26	LS1	KONE-1	1	BWD1775
2	EPA-200.8	04/26/13	04/29/13 19:36	SRM	PE-EL2	1	BWD2094
3	EPA-200.7	04/26/13	04/26/13 16:30	JRG	PE-OP2	1	BWD2092

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-10 | **Client Sample Name:** JPL-GW, MW-19-4, 4/22/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.22**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-10 | **Client Sample Name:** JPL-GW, MW-19-4, 4/22/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.41**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.14**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-10 | **Client Sample Name:** JPL-GW, MW-19-4, 4/22/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 15:35	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-10 | **Client Sample Name:** JPL-GW, MW-19-4, 4/22/2013 2:20:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 15:35	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308175-10 | **Client Sample Name:** JPL-GW, MW-19-4, 4/22/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**66**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**26**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**31**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.4**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**220**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**43**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**8.9**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**44**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.19**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**390**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.9**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/26/13	04/26/13 16:32	JRG	PE-OP2	1	BWD2092
2	SM-2320B	04/25/13	04/25/13 13:38	RML	MET-1	1	BWD2045
3	EPA-300.0	04/22/13	04/23/13 03:43	LD1	IC1	1	BWD1804
4	EPA-150.1	04/25/13	04/25/13 13:38	RML	MET-1	1	BWD2045
5	EPA-160.1	04/23/13	04/23/13 08:40	NW1	MANUAL	2	BWD1769
6	EPA-353.2	04/23/13	04/23/13 08:52	TDC	KONE-1	1	BWD1773
7	EPA-314.0	04/30/13	04/30/13 23:54	LS1	IC6	1	BWE0003

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308175-10 | **Client Sample Name:** JPL-GW, MW-19-4, 4/22/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0016**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**1.3**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**46**	**ug/L**	**50**	**6.5**	**EPA-200.7**	6.8	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/13	04/23/13 00:26	LS1	KONE-1	1	BWD1775
2	EPA-200.8	04/26/13	04/29/13 19:40	SRM	PE-EL2	1	BWD2094
3	EPA-200.7	04/26/13	04/26/13 16:32	JRG	PE-OP2	1	BWD2092

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-11 | **Client Sample Name:** JPL-GW, MW-19-3, 4/22/2013 2:50:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-11 | **Client Sample Name:** JPL-GW, MW-19-3, 4/22/2013 2:50:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-11 | **Client Sample Name:** JPL-GW, MW-19-3, 4/22/2013 2:50:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 15:58	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-11 | **Client Sample Name:** JPL-GW, MW-19-3, 4/22/2013 2:50:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 15:58	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308175-11 | **Client Sample Name:** JPL-GW, MW-19-3, 4/22/2013 2:50:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**72**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**27**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.022		1
Total Recoverable Sodium	**31**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**42**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**8.9**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**41**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**7.70**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**390**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/29/13	04/29/13 17:55	JRG	PE-OP2	1	BWD2262
2	SM-2320B	04/25/13	04/25/13 13:44	RML	MET-1	1	BWD2045
3	EPA-300.0	04/22/13	04/23/13 03:56	LD1	IC1	1	BWD1804
4	EPA-150.1	04/25/13	04/25/13 13:44	RML	MET-1	1	BWD2045
5	EPA-160.1	04/23/13	04/23/13 08:40	NW1	MANUAL	2	BWD1769
6	EPA-353.2	04/23/13	04/23/13 08:26	TDC	KONE-1	1	BWD1772
7	EPA-314.0	04/30/13	04/30/13 20:08	LS1	IC6	1	BWE0003

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308175-11 | **Client Sample Name:** JPL-GW, MW-19-3, 4/22/2013 2:50:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.00074**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**0.86**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.9**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**110**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/13	04/23/13 08:00	TDC	KONE-1	1	BWD1776
2	EPA-200.8	04/26/13	04/29/13 19:43	SRM	PE-EL2	1	BWD2094
3	EPA-200.7	04/29/13	04/29/13 17:55	JRG	PE-OP2	1	BWD2262

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-12 | **Client Sample Name:** JPL-GW, DUP-1-2Q13, 4/22/2013 11:15:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-12 | **Client Sample Name:** JPL-GW, DUP-1-2Q13, 4/22/2013 11:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	**0.11**	**ug/L**	**0.50**	**0.098**	**EPA-524.2**	ND	**J**	1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.33**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.15**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	**0.11**	**ug/L**	**0.50**	**0.093**	**EPA-524.2**	ND	**J**	1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.20**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	**2.8**	**ug/L**	**5.0**	**1.2**	**EPA-524.2**	ND	**J**	1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.49**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308175-12 | **Client Sample Name:** JPL-GW, DUP-1-2Q13, 4/22/2013 11:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 16:20	MGC	MS-V5	1	BWD2198

Battelle MHTS
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308175-12 | **Client Sample Name:** JPL-GW, DUP-1-2Q13, 4/22/2013 11:15:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 16:20	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308175-12 | **Client Sample Name:** JPL-GW, DUP-1-2Q13, 4/22/2013 11:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**6.9**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**7.1**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	0.022		1
Total Recoverable Sodium	**48**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**92**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**14**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**99**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**39**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.16		3
Nitrate as N	**0.30**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**3.7**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.36		3
pH	**9.19**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**180**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/29/13	04/29/13 17:57	JRG	PE-OP2	1	BWD2262
2	SM-2320B	04/25/13	04/25/13 14:07	RML	MET-1	1	BWD2046
3	EPA-300.0	04/22/13	04/23/13 04:10	LD1	IC1	1	BWD1805
4	EPA-150.1	04/25/13	04/25/13 14:07	RML	MET-1	1	BWD2046
5	EPA-160.1	04/23/13	04/23/13 08:40	NW1	MANUAL	2	BWD1769
6	EPA-353.2	04/23/13	04/23/13 08:37	TDC	KONE-1	1	BWD1772
7	EPA-314.0	04/30/13	04/30/13 20:21	LS1	IC6	1	BWE0003

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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308175-12 | **Client Sample Name:** JPL-GW, DUP-1-2Q13, 4/22/2013 11:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.1**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**16**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/23/13	04/23/13 08:00	TDC	KONE-1	1	BWD1776
2	EPA-200.8	04/29/13	04/29/13 21:33	SRM	PE-EL2	1	BWD2264
3	EPA-200.7	04/29/13	04/29/13 17:57	JRG	PE-OP2	1	BWD2262

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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2198						
Benzene	BWD2198-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWD2198-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWD2198-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWD2198-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWD2198-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWD2198-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWD2198-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWD2198-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWD2198-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWD2198-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BWD2198-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWD2198-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWD2198-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWD2198-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWD2198-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWD2198-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWD2198-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWD2198-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWD2198-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWD2198-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWD2198-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWD2198-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWD2198-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: BWD2198						
trans-1,3-Dichloropropene	BWD2198-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWD2198-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWD2198-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWD2198-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWD2198-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWD2198-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWD2198-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWD2198-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWD2198-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWD2198-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWD2198-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWD2198-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWD2198-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWD2198-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWD2198-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWD2198-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWD2198-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWD2198-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWD2198-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWD2198-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWD2198-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWD2198-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWD2198-BLK1	ND	ug/L	4.0	0.97	

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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: BWD2198						
Ethyl t-butyl ether	BWD2198-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWD2198-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWD2198-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWD2198-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWD2198-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWD2198-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWD2198-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWD2198-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWD2198-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWD2198-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWD2198-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWD2198-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWD2198-BLK1	103	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWD2198-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWD2198-BLK1	92.1	%	80 - 120 (LCL - UCL)		

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Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2198										
Benzene	BWD2198-BS1	LCS	26.490	25.000	ug/L	106		70 - 130		
Bromodichloromethane	BWD2198-BS1	LCS	26.730	25.000	ug/L	107		70 - 130		
Chlorobenzene	BWD2198-BS1	LCS	25.440	25.000	ug/L	102		70 - 130		
Chloroethane	BWD2198-BS1	LCS	27.390	25.000	ug/L	110		70 - 130		
1,4-Dichlorobenzene	BWD2198-BS1	LCS	27.430	25.000	ug/L	110		70 - 130		
1,1-Dichloroethane	BWD2198-BS1	LCS	25.450	25.000	ug/L	102		70 - 130		
1,1-Dichloroethene	BWD2198-BS1	LCS	26.040	25.000	ug/L	104		70 - 130		
Toluene	BWD2198-BS1	LCS	25.910	25.000	ug/L	104		70 - 130		
Trichloroethene	BWD2198-BS1	LCS	25.200	25.000	ug/L	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWD2198-BS1	LCS	10.510	10.000	ug/L	105		75 - 125		
Toluene-d8 (Surrogate)	BWD2198-BS1	LCS	10.090	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWD2198-BS1	LCS	10.200	10.000	ug/L	102		80 - 120		

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Project: JPL- GW Monitoring Wells
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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: BWD2198	Used client sample: Y - Description: MW-20-1, 04/22/2013 12:30										
Benzene	MS	1308175-08	ND	26.340	25.000	ug/L		105		70 - 130	
	MSD	1308175-08	ND	25.980	25.000	ug/L	1.4	104	20	70 - 130	
Bromodichloromethane	MS	1308175-08	0.19000	27.720	25.000	ug/L		110		70 - 130	
	MSD	1308175-08	0.19000	27.610	25.000	ug/L	0.4	110	20	70 - 130	
Chlorobenzene	MS	1308175-08	ND	25.720	25.000	ug/L		103		70 - 130	
	MSD	1308175-08	ND	25.220	25.000	ug/L	2.0	101	20	70 - 130	
Chloroethane	MS	1308175-08	ND	27.110	25.000	ug/L		108		70 - 130	
	MSD	1308175-08	ND	26.890	25.000	ug/L	0.8	108	20	70 - 130	
1,4-Dichlorobenzene	MS	1308175-08	ND	27.940	25.000	ug/L		112		70 - 130	
	MSD	1308175-08	ND	27.190	25.000	ug/L	2.7	109	20	70 - 130	
1,1-Dichloroethane	MS	1308175-08	ND	25.200	25.000	ug/L		101		70 - 130	
	MSD	1308175-08	ND	25.360	25.000	ug/L	0.6	101	20	70 - 130	
1,1-Dichloroethene	MS	1308175-08	ND	25.770	25.000	ug/L		103		70 - 130	
	MSD	1308175-08	ND	25.770	25.000	ug/L	0	103	20	70 - 130	
Toluene	MS	1308175-08	ND	26.170	25.000	ug/L		105		70 - 130	
	MSD	1308175-08	ND	25.630	25.000	ug/L	2.1	103	20	70 - 130	
Trichloroethene	MS	1308175-08	ND	24.810	25.000	ug/L		99.2		70 - 130	
	MSD	1308175-08	ND	24.900	25.000	ug/L	0.4	99.6	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1308175-08	ND	10.370	10.000	ug/L		104		75 - 125	
	MSD	1308175-08	ND	10.590	10.000	ug/L	2.1	106		75 - 125	
Toluene-d8 (Surrogate)	MS	1308175-08	ND	10.320	10.000	ug/L		103		80 - 120	
	MSD	1308175-08	ND	10.210	10.000	ug/L	1.1	102		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1308175-08	ND	10.360	10.000	ug/L		104		80 - 120	
	MSD	1308175-08	ND	10.240	10.000	ug/L	1.2	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: BWD2198						
Chloroacetonitrile	BWD2198-BLK1	0	ug/L			
1-Chlorobutane	BWD2198-BLK1	0	ug/L			
1,1-Dichloropropanone	BWD2198-BLK1	0	ug/L			
Methyl acrylate	BWD2198-BLK1	0	ug/L			
Nitrobenzene	BWD2198-BLK1	0	ug/L			
2-Nitropropane	BWD2198-BLK1	0	ug/L			

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWD1767						
Total Dissolved Solids @ 180 C	BWD1767-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWD1769						
Total Dissolved Solids @ 180 C	BWD1769-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWD1772						
Nitrite as N	BWD1772-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWD1773						
Nitrite as N	BWD1773-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWD1804						
Chloride	BWD1804-BLK1	ND	mg/L	0.50	0.068	
Nitrate as N	BWD1804-BLK1	ND	mg/L	0.10	0.021	
Sulfate	BWD1804-BLK1	ND	mg/L	1.0	0.13	
QC Batch ID: BWD1805						
Chloride	BWD1805-BLK1	0.16500	mg/L	0.50	0.068	J
Nitrate as N	BWD1805-BLK1	ND	mg/L	0.10	0.021	
Sulfate	BWD1805-BLK1	0.35700	mg/L	1.0	0.13	J
QC Batch ID: BWD2045						
Bicarbonate	BWD2045-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWD2045-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWD2045-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWD2046						
Bicarbonate	BWD2046-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWD2046-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWD2046-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWD2092						
Total Recoverable Calcium	BWD2092-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWD2092-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWD2092-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWD2092-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWD2262						
Total Recoverable Calcium	BWD2262-BLK1	ND	mg/L	0.10	0.018	

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWD2262						
Total Recoverable Magnesium	BWD2262-BLK1	0.022303	mg/L	0.050	0.020	J
Total Recoverable Sodium	BWD2262-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWD2262-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWE0002						
Perchlorate	BWE0002-BLK1	ND	ug/L	4.0	0.81	
QC Batch ID: BWE0003						
Perchlorate	BWE0003-BLK1	ND	ug/L	4.0	0.81	

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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: BWD1767										
Total Dissolved Solids @ 180 C	BWD1767-BS1	LCS	545.00	586.00	mg/L	93.0		90 - 110		
QC Batch ID: BWD1769										
Total Dissolved Solids @ 180 C	BWD1769-BS1	LCS	595.00	586.00	mg/L	102		90 - 110		
QC Batch ID: BWD1772										
Nitrite as N	BWD1772-BS1	LCS	0.47127	0.50000	mg/L	94.3		90 - 110		
QC Batch ID: BWD1773										
Nitrite as N	BWD1773-BS1	LCS	0.47167	0.50000	mg/L	94.3		90 - 110		
QC Batch ID: BWD1804										
Chloride	BWD1804-BS1	LCS	53.152	50.000	mg/L	106		90 - 110		
Nitrate as N	BWD1804-BS1	LCS	5.2510	5.0000	mg/L	105		90 - 110		
Sulfate	BWD1804-BS1	LCS	107.32	100.00	mg/L	107		90 - 110		
QC Batch ID: BWD1805										
Chloride	BWD1805-BS1	LCS	52.904	50.000	mg/L	106		90 - 110		
Nitrate as N	BWD1805-BS1	LCS	5.2430	5.0000	mg/L	105		90 - 110		
Sulfate	BWD1805-BS1	LCS	106.93	100.00	mg/L	107		90 - 110		
QC Batch ID: BWD2045										
Total Alkalinity as CaCO3	BWD2045-BS3	LCS	99.040	100.00	mg/L	99.0		90 - 110		
pH	BWD2045-BS2	LCS	7.0600	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWD2046										
Total Alkalinity as CaCO3	BWD2046-BS3	LCS	101.78	100.00	mg/L	102		90 - 110		
pH	BWD2046-BS2	LCS	7.0600	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWD2092										
Total Recoverable Calcium	BWD2092-BS1	LCS	10.075	10.000	mg/L	101		85 - 115		
Total Recoverable Magnesium	BWD2092-BS1	LCS	10.112	10.000	mg/L	101		85 - 115		
Total Recoverable Sodium	BWD2092-BS1	LCS	9.7201	10.000	mg/L	97.2		85 - 115		
Total Recoverable Potassium	BWD2092-BS1	LCS	9.5310	10.000	mg/L	95.3		85 - 115		
QC Batch ID: BWD2262										
Total Recoverable Calcium	BWD2262-BS1	LCS	10.431	10.000	mg/L	104		85 - 115		
Total Recoverable Magnesium	BWD2262-BS1	LCS	10.721	10.000	mg/L	107		85 - 115		
Total Recoverable Sodium	BWD2262-BS1	LCS	9.9710	10.000	mg/L	99.7		85 - 115		
Total Recoverable Potassium	BWD2262-BS1	LCS	9.9848	10.000	mg/L	99.8		85 - 115		
QC Batch ID: BWE0002										

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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: BWE0002										
Perchlorate	BWE0002-BS1	LCS	10.863	10.000	ug/L	109		85 - 115		
QC Batch ID: BWE0003										
Perchlorate	BWE0003-BS1	LCS	10.079	10.000	ug/L	101		85 - 115		

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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: BWD1767	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1308137-01	790.00	790.00		mg/L	0		10		
QC Batch ID: BWD1769	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1308047-01	4090.0	4100.0		mg/L	0.2		10		
QC Batch ID: BWD1772	Used client sample: Y - Description: MW-19-3, 04/22/2013 14:50										
Nitrite as N	DUP	1308175-11	ND	ND		mg/L			10		
	MS	1308175-11	ND	0.51074	0.52632	mg/L		97.0		90 - 110	
	MSD	1308175-11	ND	0.51775	0.52632	mg/L	1.4	98.4	10	90 - 110	
QC Batch ID: BWD1773	Used client sample: Y - Description: MW-20-1, 04/22/2013 12:30										
Nitrite as N	DUP	1308175-08	ND	ND		mg/L			10		
	MS	1308175-08	ND	0.52011	0.52632	mg/L		98.8		90 - 110	
	MSD	1308175-08	ND	0.52128	0.52632	mg/L	0.2	99.0	10	90 - 110	
QC Batch ID: BWD1804	Used client sample: Y - Description: MW-20-1, 04/22/2013 12:30										
Chloride	DUP	1308175-08	33.408	33.429		mg/L	0.1		10		
	MS	1308175-08	33.408	87.158	50.505	mg/L		106		80 - 120	
	MSD	1308175-08	33.408	87.134	50.505	mg/L	0.0	106	10	80 - 120	
Nitrate as N	DUP	1308175-08	3.9300	3.7630		mg/L	4.3		10		
	MS	1308175-08	3.9300	9.1768	5.0505	mg/L		104		80 - 120	
	MSD	1308175-08	3.9300	9.1758	5.0505	mg/L	0.0	104	10	80 - 120	
Sulfate	DUP	1308175-08	67.829	67.973		mg/L	0.2		10		
	MS	1308175-08	67.829	175.60	101.01	mg/L		107		80 - 120	
	MSD	1308175-08	67.829	175.56	101.01	mg/L	0.0	107	10	80 - 120	
QC Batch ID: BWD1805	Used client sample: N										
Chloride	DUP	1308163-04	767.00	765.58		mg/L	0.2		10		
	MS	1308163-04	767.00	1007.0	252.53	mg/L		95.0		80 - 120	
	MSD	1308163-04	767.00	1008.2	252.53	mg/L	0.1	95.5	10	80 - 120	
Nitrate as N	DUP	1308163-04	ND	ND		mg/L			10		
	MS	1308163-04	ND	27.273	25.253	mg/L		108		80 - 120	
	MSD	1308163-04	ND	27.455	25.253	mg/L	0.7	109	10	80 - 120	
Sulfate	DUP	1308163-04	4.2300	4.1500		mg/L	1.9		10		J
	MS	1308163-04	4.2300	531.56	505.05	mg/L		104		80 - 120	
	MSD	1308163-04	4.2300	533.62	505.05	mg/L	0.4	105	10	80 - 120	
QC Batch ID: BWD2045	Used client sample: Y - Description: SB-1-42213, 04/22/2013 09:00										
Bicarbonate	DUP	1308175-02	ND	ND		mg/L			10		
Carbonate	DUP	1308175-02	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308175-02	ND	ND		mg/L			10		
pH	DUP	1308175-02	6.0000	5.8700		pH Units	2.2		20		

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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: BWD2046	Used client sample: Y - Description: DUP-1-2Q13, 04/22/2013 11:15										
Bicarbonate	DUP	1308175-12	92.007	87.922		mg/L	4.5		10		
Carbonate	DUP	1308175-12	13.862	13.502		mg/L	2.6		10		
Total Alkalinity as CaCO3	DUP	1308175-12	98.580	94.630		mg/L	4.1		10		
pH	DUP	1308175-12	9.1900	9.1900		pH Units	0		20		
QC Batch ID: BWD2092	Used client sample: Y - Description: MW-20-1, 04/22/2013 12:30										
Total Recoverable Calcium	DUP	1308175-08	68.933	67.419		mg/L	2.2		20		
	MS	1308175-08	68.933	80.689	10.000	mg/L		118		75 - 125	
	MSD	1308175-08	68.933	79.328	10.000	mg/L	1.7	104	20	75 - 125	
Total Recoverable Magnesium	DUP	1308175-08	22.985	22.269		mg/L	3.2		20		
	MS	1308175-08	22.985	33.593	10.000	mg/L		106		75 - 125	
	MSD	1308175-08	22.985	33.083	10.000	mg/L	1.5	101	20	75 - 125	
Total Recoverable Sodium	DUP	1308175-08	19.183	18.017		mg/L	6.3		20		
	MS	1308175-08	19.183	29.602	10.000	mg/L		104		75 - 125	
	MSD	1308175-08	19.183	28.591	10.000	mg/L	3.5	94.1	20	75 - 125	
Total Recoverable Potassium	DUP	1308175-08	2.9455	2.7932		mg/L	5.3		20		
	MS	1308175-08	2.9455	12.926	10.000	mg/L		99.8		75 - 125	
	MSD	1308175-08	2.9455	12.564	10.000	mg/L	2.8	96.2	20	75 - 125	
QC Batch ID: BWD2262	Used client sample: N										
Total Recoverable Calcium	DUP	1308436-01	3.4830	3.4263		mg/L	1.6		20		
	MS	1308436-01	3.4830	13.532	10.000	mg/L		100		75 - 125	
	MSD	1308436-01	3.4830	14.010	10.000	mg/L	3.5	105	20	75 - 125	
Total Recoverable Magnesium	DUP	1308436-01	52.608	51.899		mg/L	1.4		20		
	MS	1308436-01	52.608	62.386	10.000	mg/L		97.8		75 - 125	
	MSD	1308436-01	52.608	64.369	10.000	mg/L	3.1	118	20	75 - 125	
Total Recoverable Sodium	DUP	1308436-01	6.8686	6.6926		mg/L	2.6		20		
	MS	1308436-01	6.8686	16.503	10.000	mg/L		96.3		75 - 125	
	MSD	1308436-01	6.8686	17.096	10.000	mg/L	3.5	102	20	75 - 125	
Total Recoverable Potassium	DUP	1308436-01	0.15496	0.14800		mg/L	4.6		20		J
	MS	1308436-01	0.15496	9.8671	10.000	mg/L		97.1		75 - 125	
	MSD	1308436-01	0.15496	10.277	10.000	mg/L	4.1	101	20	75 - 125	
QC Batch ID: BWE0002	Used client sample: Y - Description: SB-1-42213, 04/22/2013 09:00										
Perchlorate	DUP	1308175-02	ND	ND		ug/L			15		
	MS	1308175-02	ND	10.533	10.101	ug/L		104		80 - 120	
	MSD	1308175-02	ND	10.506	10.101	ug/L	0.3	104	15	80 - 120	
QC Batch ID: BWE0003	Used client sample: Y - Description: MW-20-1, 04/22/2013 12:30										

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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: BWE0003	Used client sample: Y - Description: MW-20-1, 04/22/2013 12:30										
Perchlorate	DUP	1308175-08	ND	ND		ug/L			15		
	MS	1308175-08	ND	9.2884	10.101	ug/L		92.0		80 - 120	
	MSD	1308175-08	ND	9.9355	10.101	ug/L	6.7	98.4	15	80 - 120	

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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: BWD1775						
Hexavalent Chromium	BWD1775-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWD1776						
Hexavalent Chromium	BWD1776-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWD2092						
Total Recoverable Iron	BWD2092-BLK1	6.8410	ug/L	50	6.5	J
QC Batch ID: BWD2094						
Total Recoverable Arsenic	BWD2094-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWD2094-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWD2094-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BWD2262						
Total Recoverable Iron	BWD2262-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWD2264						
Total Recoverable Arsenic	BWD2264-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWD2264-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWD2264-BLK1	ND	ug/L	1.0	0.10	

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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: BWD1775										
Hexavalent Chromium	BWD1775-BS1	LCS	0.054511	0.050000	mg/L	109		85 - 115		
QC Batch ID: BWD1776										
Hexavalent Chromium	BWD1776-BS1	LCS	0.049026	0.050000	mg/L	98.1		85 - 115		
QC Batch ID: BWD2092										
Total Recoverable Iron	BWD2092-BS1	LCS	1046.4	1000.0	ug/L	105		85 - 115		
QC Batch ID: BWD2094										
Total Recoverable Arsenic	BWD2094-BS1	LCS	100.45	100.00	ug/L	100		85 - 115		
Total Recoverable Chromium	BWD2094-BS1	LCS	41.041	40.000	ug/L	103		85 - 115		
Total Recoverable Lead	BWD2094-BS1	LCS	97.336	100.00	ug/L	97.3		85 - 115		
QC Batch ID: BWD2262										
Total Recoverable Iron	BWD2262-BS1	LCS	1076.0	1000.0	ug/L	108		85 - 115		
QC Batch ID: BWD2264										
Total Recoverable Arsenic	BWD2264-BS1	LCS	102.09	100.00	ug/L	102		85 - 115		
Total Recoverable Chromium	BWD2264-BS1	LCS	42.787	40.000	ug/L	107		85 - 115		
Total Recoverable Lead	BWD2264-BS1	LCS	100.36	100.00	ug/L	100		85 - 115		

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD1775	Used client sample: Y - Description: MW-20-1, 04/22/2013 12:30										
Hexavalent Chromium	DUP	1308175-08	ND	ND		mg/L			10		
	MS	1308175-08	ND	0.052736	0.052632	mg/L		100		85 - 115	
	MSD	1308175-08	ND	0.052911	0.052632	mg/L	0.3	101	10	85 - 115	
QC Batch ID: BWD1776	Used client sample: Y - Description: MW-19-3, 04/22/2013 14:50										
Hexavalent Chromium	DUP	1308175-11	0.00074500	0.00072000		mg/L	3.4		10		J
	MS	1308175-11	0.00074500	0.052672	0.052632	mg/L		98.7		85 - 115	
	MSD	1308175-11	0.00074500	0.053008	0.052632	mg/L	0.6	99.3	10	85 - 115	
QC Batch ID: BWD2092	Used client sample: Y - Description: MW-20-1, 04/22/2013 12:30										
Total Recoverable Iron	DUP	1308175-08	75.960	72.821		ug/L	4.2		20		
	MS	1308175-08	75.960	1177.4	1000.0	ug/L		110		75 - 125	
	MSD	1308175-08	75.960	1138.8	1000.0	ug/L	3.3	106	20	75 - 125	
QC Batch ID: BWD2094	Used client sample: Y - Description: MW-20-1, 04/22/2013 12:30										
Total Recoverable Arsenic	DUP	1308175-08	ND	ND		ug/L			20		
	MS	1308175-08	ND	105.60	100.00	ug/L		106		70 - 130	
	MSD	1308175-08	ND	107.58	100.00	ug/L	1.9	108	20	70 - 130	
Total Recoverable Chromium	DUP	1308175-08	ND	ND		ug/L			20		
	MS	1308175-08	ND	38.827	40.000	ug/L		97.1		70 - 130	
	MSD	1308175-08	ND	38.490	40.000	ug/L	0.9	96.2	20	70 - 130	
Total Recoverable Lead	DUP	1308175-08	ND	ND		ug/L			20		
	MS	1308175-08	ND	94.462	100.00	ug/L		94.5		70 - 130	
	MSD	1308175-08	ND	94.447	100.00	ug/L	0.0	94.4	20	70 - 130	
QC Batch ID: BWD2262	Used client sample: N										
Total Recoverable Iron	DUP	1308436-01	7.4111	ND		ug/L			20		
	MS	1308436-01	7.4111	1040.9	1000.0	ug/L		103		75 - 125	
	MSD	1308436-01	7.4111	1073.9	1000.0	ug/L	3.1	107	20	75 - 125	
QC Batch ID: BWD2264	Used client sample: N										
Total Recoverable Arsenic	DUP	1308009-01	3.7520	3.5930		ug/L	4.3		20		
	MS	1308009-01	3.7520	103.73	100.00	ug/L		100		70 - 130	
	MSD	1308009-01	3.7520	100.40	100.00	ug/L	3.3	96.6	20	70 - 130	
Total Recoverable Chromium	DUP	1308009-01	0.99700	1.2860		ug/L	25.3		20		J,A02
	MS	1308009-01	0.99700	36.226	40.000	ug/L		88.1		70 - 130	
	MSD	1308009-01	0.99700	35.351	40.000	ug/L	2.4	85.9	20	70 - 130	
Total Recoverable Lead	DUP	1308009-01	ND	ND		ug/L			20		
	MS	1308009-01	ND	91.659	100.00	ug/L		91.7		70 - 130	
	MSD	1308009-01	ND	88.973	100.00	ug/L	3.0	89.0	20	70 - 130	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:04
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A02	The difference between duplicate readings is less than the PQL.
S05	The sample holding time was exceeded.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/15/2013

David Conner

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Project: JPL- GW Monitoring Wells
BC Work Order: 1308285
Invoice ID: B146163

Enclosed are the results of analyses for samples received by the laboratory on 4/23/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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 1308285 Page 1 of 3

BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

Report & Bill to:

Name: Battelle MHTS
Phone: (614) 458-5489
Address: 505 King Ave.
Project: 2Q13 JPL
City: Columbus
Project #:
State: OH
ZIP: 43201
Samplers Name: Andy Wolff
Attn: David Conner
13-08285

Analysis Requested

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
-1	TB-2-4/23/13	4-23-13	0630	AQ	X	X	X	X	X	X	X	X	X	X	X	X			X	
-2	SB-2-4/23/13		0700		X	X	X	X	X	X	X	X	X	X	X	X			X	
-3	FB-2-4/23/13		0710		X	X	X	X	X	X	X	X	X	X	X	X			X	
-4	MW-19-2		0745		X	X	X	X	X	X	X	X	X	X	X	X			X	
-5	MW-19-1		0945		X	X	X	X	X	X	X	X	X	X	X	X			X	
-6	MW-14-5		1110		X	X	X	X	X	X	X	X	X	X	X	X			X	MS/MSD
-7	MW-14-4		1140		X	X	X	X	X	X	X	X	X	X	X	X			X	
-8	MW-14-3		1230		X	X	X	X	X	X	X	X	X	X	X	X			X	
-9	MW-14-2		1305		X	X	X	X	X	X	X	X	X	X	X	X			X	
-10	MW-14-1		1335		X	X	X	X	X	X	X	X	X	X	X	X			X	
-11	DUP-2-4/23/13#3	↓	1145	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	
	2013																			

CHK BY KW
DISTRIBUTION
SUB OUT ☐

Relinquished by: (Signature) — Date & Time
Received By: Nicole 4/23/13 1600

Relinquished by: (Signature) Nicole — Date & Time
Received by: Jen M 4-23-13 1630

Relinquished by: (Signature) — Date & Time
Received By: Jen Mor 4-23-13 1930

4/23/13 1930

SHORT HOLDING TIME
Cr+6 (NO2) (NO3) OP SS
DO Cl2 BOD MBAS COT

Chain of Custody and Cooler Receipt Form for 1308285 Page 2 of 3

C LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 08/17/12 Page 1 Of 2

ubmission #: 13-08285

SHIPPING INFORMATION
ederal Express ☐ UPS ☐ Hand Delivery ☐
C Lab Field Service ☑ Other ☐ (Specify)_____

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

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

ustody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments:

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

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: Qtpe Thermometer ID: 207

Temperature: (A) 2.7 °C / (C) 2.6 °C

Date/Time 4-23-13 1830

Analyst Init KIQ

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
T GENERAL MINERAL/ GENERAL PHYSICAL		B	B	B	B	B	B	B	B	B
T PE UNPRESERVED										
T INORGANIC CHEMICAL METALS										
T INORGANIC CHEMICAL METALS		C	C	C	C	C	C	C	C	C
T CYANIDE										
T NITROGEN FORMS										
T TOTAL SULFIDE										
oz. NITRATE / NITRITE										
T TOTAL ORGANIC CARBON										
T TOX										
T CHEMICAL OXYGEN DEMAND										
A PHENOLICS										
0ml VOA VIAL TRAVEL BLANK	A(1)									
0ml VOA VIAL		A,3	A,3	A,3	A,3	A,3	A,3	A6	A,3	A3
QT EPA 413.1, 413.2, 418.1										
T ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
EPH VIAL										
PLASTIC BAG										
FERROUS IRON										
[illegible]										
[illegible]										

KIQ 4/23/13 @ 2050

Chain of Custody and Cooler Receipt Form for 1308285 Page 3 of 3

LABORATORIES INC — COOLER RECEIPT FORM — Rev. No. 13 08/17/12 — Page 2 Of 2

Submission #: 13-08285

SHIPPING INFORMATION	SHIPPING CONTAINER
deral Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☑ None ☐
Lab Field Service ☑ Other ☐ (Specify)_____	Box ☐ Other ☐ (Specify)_____

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

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

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

☑ COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: Qtpe Thermometer ID: 207

Temperature: (A) 2.7 °C / (C) 2.6 °C

Date/Time 4-23-13 1830

Analyst Init KLV

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
GENERAL MINERAL/ GENERAL PHYSICAL	B									
PE UNPRESERVED										
INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS	C									
CYANIDE										
NITROGEN FORMS										
TOTAL SULFIDE										
NITRATE / NITRITE										
TOTAL ORGANIC CARBON										
TOX										
CHEMICAL OXYGEN DEMAND										
PHENOLICS										
VOA VIAL TRAVEL BLANK										
VOA VIAL	A3									
EPA 413.1, 413.2, 418.1										
ODOR										
BIOLOGICAL										
BACTERIOLOGICAL										
VOA VIAL- 504										
EPA 508/608/8080										
EPA 515.1/8150										
EPA 525										
EPA 525 TRAVEL BLANK										
EPA 547										
EPA 531.1										
EPA 548										
EPA 549										
EPA 632										
EPA 8015M										
AMBER										
OZ JAR										
OZ JAR										
L SLEEVE										
[illegible]										
[illegible]										
[illegible]										
[illegible]										

KLV 4/23/13 @ 2050

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308285-01	**COC Number:**	---	**Receive Date:**	04/23/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2013 06:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-2-42313	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-2-42313	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308285-02	**COC Number:**	---	**Receive Date:**	04/23/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2013 07:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-2-42313	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): SB-2-42313	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308285-03	**COC Number:**	---	**Receive Date:**	04/23/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2013 07:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-2-42313	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-2-42313	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308285-04	**COC Number:**	---	**Receive Date:**	04/23/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2013 07:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-2	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308285-05	**COC Number:**	---	**Receive Date:**	04/23/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2013 09:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-19-1	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-19-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308285-06	**COC Number:**	---	**Receive Date:**	04/23/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2013 11:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-5	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308285-07	**COC Number:**	---	**Receive Date:**	04/23/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2013 11:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-4	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308285-08	**COC Number:**	---	**Receive Date:**	04/23/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2013 12:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-3	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308285-09	**COC Number:**	---	**Receive Date:**	04/23/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2013 13:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-2	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308285-10	**COC Number:**	---	**Receive Date:**	04/23/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2013 13:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-14-1	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-14-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308285-11	**COC Number:**	---	**Receive Date:**	04/23/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	04/23/2013 11:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-2-2Q13	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-2-2Q13	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-01 | **Client Sample Name:** JPL-GW, TB-2-42313, 4/23/2013 6:30:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-01 | **Client Sample Name:** JPL-GW, TB-2-42313, 4/23/2013 6:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-01 | **Client Sample Name:** JPL-GW, TB-2-42313, 4/23/2013 6:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 21:14	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308285-01 | **Client Sample Name:** JPL-GW, TB-2-42313, 4/23/2013 6:30:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 21:14	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-02 | **Client Sample Name:** JPL-GW, SB-2-42313, 4/23/2013 7:00:00AM, Andy Wolff

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

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505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-02 | **Client Sample Name:** JPL-GW, SB-2-42313, 4/23/2013 7:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-02 | **Client Sample Name:** JPL-GW, SB-2-42313, 4/23/2013 7:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 21:36	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308285-02 | **Client Sample Name:** JPL-GW, SB-2-42313, 4/23/2013 7:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 21:36	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308285-02 | **Client Sample Name:** JPL-GW, SB-2-42313, 4/23/2013 7:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**0.032**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND	**J**	1
Total Recoverable Magnesium	**0.021**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND	**J**	1
Total Recoverable Sodium	**0.23**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND	**J**	1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.27**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.26	**J**	3
Nitrate as N	ND	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	**0.37**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.26	**J**	3
pH	**5.80**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/13	04/30/13 17:07	JRG	PE-OP2	1	BWD2358
2	SM-2320B	04/25/13	04/25/13 17:44	RML	MET-1	1	BWD2048
3	EPA-300.0	04/23/13	04/24/13 05:49	LD1	IC5	1	BWD1948
4	EPA-150.1	04/25/13	04/25/13 17:44	RML	MET-1	1	BWD2048
5	EPA-160.1	04/24/13	04/24/13 08:30	NW1	MANUAL	0.667	BWD1884
6	EPA-353.2	04/24/13	04/24/13 07:38	TDC	KONE-1	1	BWD1918
7	EPA-314.0	05/01/13	05/01/13 01:50	LD1	IC6	1	BWE0078

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308285-02 | **Client Sample Name:** JPL-GW, SB-2-42313, 4/23/2013 7:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.0**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**11**	**ug/L**	**50**	**6.5**	**EPA-200.7**	13	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/13	04/24/13 01:52	LS1	KONE-1	1	BWD1917
2	EPA-200.8	04/29/13	04/29/13 21:40	SRM	PE-EL2	1	BWD2264
3	EPA-200.7	04/30/13	04/30/13 17:07	JRG	PE-OP2	1	BWD2358

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-03 | **Client Sample Name:** JPL-GW, EB-2-42313, 4/23/2013 7:10:00AM, Andy Wolff

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

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505 King Ave.
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Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-03 | **Client Sample Name:** JPL-GW, EB-2-42313, 4/23/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-03 | **Client Sample Name:** JPL-GW, EB-2-42313, 4/23/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 21:59	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308285-03 | **Client Sample Name:** JPL-GW, EB-2-42313, 4/23/2013 7:10:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 21:59	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308285-03 | **Client Sample Name:** JPL-GW, EB-2-42313, 4/23/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	ND	mg/L	0.50	0.17	EPA-200.7	ND		1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.49**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.26	**J**	3
Nitrate as N	ND	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	ND	mg/L	1.0	0.13	EPA-300.0	0.26		3
pH	**5.06**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/13	04/30/13 17:17	JRG	PE-OP2	1	BWD2358
2	SM-2320B	04/25/13	04/25/13 17:50	RML	MET-1	1	BWD2048
3	EPA-300.0	04/23/13	04/24/13 06:03	LD1	IC5	1	BWD1948
4	EPA-150.1	04/25/13	04/25/13 17:50	RML	MET-1	1	BWD2048
5	EPA-160.1	04/24/13	04/24/13 08:30	NW1	MANUAL	0.667	BWD1884
6	EPA-353.2	04/24/13	04/24/13 07:38	TDC	KONE-1	1	BWD1918
7	EPA-314.0	05/01/13	05/01/13 02:03	LD1	IC6	1	BWE0078

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308285-03 | **Client Sample Name:** JPL-GW, EB-2-42313, 4/23/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	13		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/13	04/24/13 01:52	LS1	KONE-1	1	BWD1917
2	EPA-200.8	04/29/13	04/29/13 21:43	SRM	PE-EL2	1	BWD2264
3	EPA-200.7	04/30/13	04/30/13 17:17	JRG	PE-OP2	1	BWD2358

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505 King Ave.
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Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-04 | **Client Sample Name:** JPL-GW, MW-19-2, 4/23/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**0.23**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.60**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.22**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.21**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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505 King Ave.
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Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-04 | **Client Sample Name:** JPL-GW, MW-19-2, 4/23/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.46**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.72**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-04 | **Client Sample Name:** JPL-GW, MW-19-2, 4/23/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 22:21	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308285-04 | **Client Sample Name:** JPL-GW, MW-19-2, 4/23/2013 7:45:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 22:21	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308285-04 | **Client Sample Name:** JPL-GW, MW-19-2, 4/23/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**120**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**44**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**35**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**290**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**240**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**97**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.26		3
Nitrate as N	**14**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**130**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.26		3
pH	**7.63**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**680**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**4.2**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/13	04/30/13 17:19	JRG	PE-OP2	1	BWD2358
2	SM-2320B	04/25/13	04/25/13 16:03	RML	MET-1	1	BWD2047
3	EPA-300.0	04/23/13	04/24/13 06:16	LD1	IC5	1	BWD1948
4	EPA-150.1	04/25/13	04/25/13 16:03	RML	MET-1	1	BWD2047
5	EPA-160.1	04/24/13	04/24/13 08:30	NW1	MANUAL	3.333	BWD1884
6	EPA-353.2	04/24/13	04/24/13 07:38	TDC	KONE-1	1	BWD1918
7	EPA-314.0	05/01/13	05/01/13 12:39	LD1	IC6	1	BWE0078

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308285-04 | **Client Sample Name:** JPL-GW, MW-19-2, 4/23/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.7**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**660**	**ug/L**	**50**	**6.5**	**EPA-200.7**	13		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/13	04/24/13 01:52	LS1	KONE-1	1	BWD1917
2	EPA-200.8	04/29/13	04/29/13 21:46	SRM	PE-EL2	1	BWD2264
3	EPA-200.7	04/30/13	04/30/13 17:19	JRG	PE-OP2	1	BWD2358

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-05 | **Client Sample Name:** JPL-GW, MW-19-1, 4/23/2013 9:45:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-05 | **Client Sample Name:** JPL-GW, MW-19-1, 4/23/2013 9:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-05 | **Client Sample Name:** JPL-GW, MW-19-1, 4/23/2013 9:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 22:44	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308285-05 | **Client Sample Name:** JPL-GW, MW-19-1, 4/23/2013 9:45:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 22:44	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308285-05 | **Client Sample Name:** JPL-GW, MW-19-1, 4/23/2013 9:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**51**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**17**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**14**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**9.7**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.26		3
Nitrate as N	**0.032**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND	**J**	3
Sulfate	**26**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.26		3
pH	**7.74**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**270**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	**0.012**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND	**J**	6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/13	04/30/13 17:22	JRG	PE-OP2	1	BWD2358
2	SM-2320B	04/25/13	04/25/13 16:39	RML	MET-1	1	BWD2047
3	EPA-300.0	04/23/13	04/24/13 06:30	LD1	IC5	1	BWD1948
4	EPA-150.1	04/25/13	04/25/13 16:39	RML	MET-1	1	BWD2047
5	EPA-160.1	04/24/13	04/24/13 08:30	NW1	MANUAL	2	BWD1884
6	EPA-353.2	04/24/13	04/24/13 07:38	TDC	KONE-1	1	BWD1918
7	EPA-314.0	05/01/13	05/01/13 02:30	LD1	IC6	1	BWE0078

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308285-05 | **Client Sample Name:** JPL-GW, MW-19-1, 4/23/2013 9:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**2000**	**ug/L**	**50**	**6.5**	**EPA-200.7**	13		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/13	04/24/13 01:52	LS1	KONE-1	1	BWD1917
2	EPA-200.8	04/29/13	04/29/13 21:49	SRM	PE-EL2	1	BWD2264
3	EPA-200.7	04/30/13	04/30/13 17:22	JRG	PE-OP2	1	BWD2358

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-06 | **Client Sample Name:** JPL-GW, MW-14-5, 4/23/2013 11:10:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-06 | **Client Sample Name:** JPL-GW, MW-14-5, 4/23/2013 11:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-06 | **Client Sample Name:** JPL-GW, MW-14-5, 4/23/2013 11:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 23:06	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308285-06 | **Client Sample Name:** JPL-GW, MW-14-5, 4/23/2013 11:10:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 23:06	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308285-06 | **Client Sample Name:** JPL-GW, MW-14-5, 4/23/2013 11:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**20**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**13**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**31**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**160**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**4.2**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**140**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**9.8**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.26		3
Nitrate as N	**0.32**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**17**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.26		3
pH	**8.49**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**190**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/13	04/30/13 17:24	JRG	PE-OP2	1	BWD2358
2	SM-2320B	04/25/13	04/25/13 16:11	RML	MET-1	1	BWD2047
3	EPA-300.0	04/23/13	04/24/13 06:43	LD1	IC5	1	BWD1948
4	EPA-150.1	04/25/13	04/25/13 16:11	RML	MET-1	1	BWD2047
5	EPA-160.1	04/24/13	04/24/13 08:30	NW1	MANUAL	2	BWD1884
6	EPA-353.2	04/24/13	04/24/13 07:43	TDC	KONE-1	1	BWD1918
7	EPA-314.0	05/01/13	05/01/13 02:43	LD1	IC6	1	BWE0078

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308285-06 | **Client Sample Name:** JPL-GW, MW-14-5, 4/23/2013 11:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.3**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**100**	**ug/L**	**50**	**6.5**	**EPA-200.7**	13		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/13	04/24/13 01:36	LS1	KONE-1	1	BWD1917
2	EPA-200.8	04/29/13	04/29/13 21:53	SRM	PE-EL2	1	BWD2264
3	EPA-200.7	04/30/13	04/30/13 17:24	JRG	PE-OP2	1	BWD2358

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505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-07 | **Client Sample Name:** JPL-GW, MW-14-4, 4/23/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.27**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	**0.080**	**ug/L**	**0.50**	**0.072**	**EPA-524.2**	ND	**J**	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.16**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.15**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-07 | **Client Sample Name:** JPL-GW, MW-14-4, 4/23/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.27**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.28**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-07 | **Client Sample Name:** JPL-GW, MW-14-4, 4/23/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 23:29	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308285-07 | **Client Sample Name:** JPL-GW, MW-14-4, 4/23/2013 11:40:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 23:29	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308285-07 | **Client Sample Name:** JPL-GW, MW-14-4, 4/23/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**80**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**28**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**33**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**65**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.26		3
Nitrate as N	**13**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**69**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.26		3
pH	**8.05**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**460**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/13	04/30/13 17:27	JRG	PE-OP2	1	BWD2358
2	SM-2320B	04/25/13	04/25/13 16:19	RML	MET-1	1	BWD2047
3	EPA-300.0	04/23/13	04/24/13 06:56	LD1	IC5	1	BWD1948
4	EPA-150.1	04/25/13	04/25/13 16:19	RML	MET-1	1	BWD2047
5	EPA-160.1	04/24/13	04/24/13 08:30	NW1	MANUAL	2	BWD1884
6	EPA-353.2	04/24/13	04/24/13 07:43	TDC	KONE-1	1	BWD1918
7	EPA-314.0	05/01/13	05/01/13 02:56	LD1	IC6	1	BWE0078

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308285-07 | **Client Sample Name:** JPL-GW, MW-14-4, 4/23/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0014**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**2.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**25**	**ug/L**	**50**	**6.5**	**EPA-200.7**	13	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/13	04/24/13 01:36	LS1	KONE-1	1	BWD1917
2	EPA-200.8	04/30/13	04/30/13 21:20	JSS	PE-EL1	1	BWD2396
3	EPA-200.7	04/30/13	04/30/13 17:27	JRG	PE-OP2	1	BWD2358

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-08 | **Client Sample Name:** JPL-GW, MW-14-3, 4/23/2013 12:30:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.47**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.23**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.12**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-08 | **Client Sample Name:** JPL-GW, MW-14-3, 4/23/2013 12:30:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.33**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.5**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-08 | **Client Sample Name:** JPL-GW, MW-14-3, 4/23/2013 12:30:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	88.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 17:05	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308285-08 | **Client Sample Name:** JPL-GW, MW-14-3, 4/23/2013 12:30:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 17:05	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308285-08 | **Client Sample Name:** JPL-GW, MW-14-3, 4/23/2013 12:30:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**130**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**51**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**43**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**290**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**240**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**110**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.26		3
Nitrate as N	**14**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**170**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.26		3
pH	**8.01**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**720**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**4.8**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/13	04/30/13 16:52	JRG	PE-OP2	1	BWD2358
2	SM-2320B	04/25/13	04/25/13 16:26	RML	MET-1	2	BWD2047
3	EPA-300.0	04/23/13	04/24/13 10:34	LD1	IC5	1	BWD1948
4	EPA-150.1	04/25/13	04/25/13 16:26	RML	MET-1	1	BWD2047
5	EPA-160.1	04/24/13	04/24/13 08:30	NW1	MANUAL	3.333	BWD1884
6	EPA-353.2	04/24/13	04/24/13 07:38	TDC	KONE-1	1	BWD1918
7	EPA-314.0	05/01/13	05/01/13 03:10	LD1	IC6	1	BWE0078

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308285-08 | **Client Sample Name:** JPL-GW, MW-14-3, 4/23/2013 12:30:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**100**	**ug/L**	**50**	**6.5**	**EPA-200.7**	13		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/13	04/24/13 01:51	LS1	KONE-1	1	BWD1917
2	EPA-200.8	04/30/13	04/30/13 20:21	JSS	PE-EL1	1	BWD2396
3	EPA-200.7	04/30/13	04/30/13 16:52	JRG	PE-OP2	1	BWD2358

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-09 | **Client Sample Name:** JPL-GW, MW-14-2, 4/23/2013 1:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.53**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.17**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.22**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	**0.17**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-09 | **Client Sample Name:** JPL-GW, MW-14-2, 4/23/2013 1:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.32**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**4.6**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-09 | **Client Sample Name:** JPL-GW, MW-14-2, 4/23/2013 1:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 17:28	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308285-09 | **Client Sample Name:** JPL-GW, MW-14-2, 4/23/2013 1:05:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 17:28	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308285-09 | **Client Sample Name:** JPL-GW, MW-14-2, 4/23/2013 1:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**140**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**48**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**39**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**290**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**240**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**120**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.26		3
Nitrate as N	**12**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**200**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.26		3
pH	**7.70**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**830**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	**0.44**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND		6
Perchlorate	**4.1**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/13	04/30/13 17:29	JRG	PE-OP2	1	BWD2358
2	SM-2320B	04/25/13	04/25/13 16:33	RML	MET-1	2	BWD2047
3	EPA-300.0	04/23/13	04/24/13 10:47	LD1	IC5	1	BWD1948
4	EPA-150.1	04/25/13	04/25/13 16:33	RML	MET-1	1	BWD2047
5	EPA-160.1	04/24/13	04/24/13 08:30	NW1	MANUAL	3.333	BWD1884
6	EPA-353.2	04/24/13	04/24/13 07:43	TDC	KONE-1	1	BWD1918
7	EPA-314.0	05/01/13	05/01/13 03:23	LD1	IC6	1	BWE0078

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308285-09 | **Client Sample Name:** JPL-GW, MW-14-2, 4/23/2013 1:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**62**	**ug/L**	**50**	**6.5**	**EPA-200.7**	13		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/13	04/24/13 01:36	LS1	KONE-1	1	BWD1917
2	EPA-200.8	04/30/13	04/30/13 21:23	JSS	PE-EL1	1	BWD2396
3	EPA-200.7	04/30/13	04/30/13 17:29	JRG	PE-OP2	1	BWD2358

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Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-10 | **Client Sample Name:** JPL-GW, MW-14-1, 4/23/2013 1:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.53**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.090**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-10 | **Client Sample Name:** JPL-GW, MW-14-1, 4/23/2013 1:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	**0.58**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.21**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**2.0**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-10 | **Client Sample Name:** JPL-GW, MW-14-1, 4/23/2013 1:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 17:50	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308285-10 | **Client Sample Name:** JPL-GW, MW-14-1, 4/23/2013 1:35:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 17:50	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308285-10 | **Client Sample Name:** JPL-GW, MW-14-1, 4/23/2013 1:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**130**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**43**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**63**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**220**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**130**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.26		3
Nitrate as N	**13**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**200**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.26		3
pH	**7.08**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**810**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/13	04/30/13 17:32	JRG	PE-OP2	1	BWD2358
2	SM-2320B	04/25/13	04/25/13 17:04	RML	MET-1	2	BWD2048
3	EPA-300.0	04/23/13	04/24/13 11:01	LD1	IC5	1	BWD1948
4	EPA-150.1	04/25/13	04/25/13 17:04	RML	MET-1	1	BWD2048
5	EPA-160.1	04/24/13	04/24/13 08:30	NW1	MANUAL	3.333	BWD1884
6	EPA-353.2	04/24/13	04/24/13 07:43	TDC	KONE-1	1	BWD1918
7	EPA-314.0	05/01/13	05/01/13 04:03	LD1	IC6	1	BWE0078

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308285-10 | **Client Sample Name:** JPL-GW, MW-14-1, 4/23/2013 1:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0088**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.81**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**190**	**ug/L**	**50**	**6.5**	**EPA-200.7**	13		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/13	04/24/13 01:36	LS1	KONE-1	1	BWD1917
2	EPA-200.8	04/30/13	04/30/13 21:26	JSS	PE-EL1	1	BWD2396
3	EPA-200.7	04/30/13	04/30/13 17:32	JRG	PE-OP2	1	BWD2358

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-11 | **Client Sample Name:** JPL-GW, DUP-2-2Q13, 4/23/2013 11:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.26**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	**0.090**	**ug/L**	**0.50**	**0.072**	**EPA-524.2**	ND	**J**	1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.15**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.17**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-11 | **Client Sample Name:** JPL-GW, DUP-2-2Q13, 4/23/2013 11:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.24**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.27**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308285-11 | **Client Sample Name:** JPL-GW, DUP-2-2Q13, 4/23/2013 11:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 23:51	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308285-11 | **Client Sample Name:** JPL-GW, DUP-2-2Q13, 4/23/2013 11:45:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/28/13 23:51	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308285-11 | **Client Sample Name:** JPL-GW, DUP-2-2Q13, 4/23/2013 11:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**82**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**29**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**34**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**65**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.26		3
Nitrate as N	**13**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**69**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.26		3
pH	**7.99**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**470**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.0**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	04/30/13	04/30/13 17:34	JRG	PE-OP2	1	BWD2358
2	SM-2320B	04/25/13	04/25/13 17:17	RML	MET-1	1	BWD2048
3	EPA-300.0	04/23/13	04/24/13 07:37	LD1	IC5	1	BWD1948
4	EPA-150.1	04/25/13	04/25/13 17:17	RML	MET-1	1	BWD2048
5	EPA-160.1	04/24/13	04/24/13 08:30	NW1	MANUAL	2	BWD1884
6	EPA-353.2	04/24/13	04/24/13 07:43	TDC	KONE-1	1	BWD1918
7	EPA-314.0	05/01/13	05/01/13 13:05	LD1	IC6	1	BWE0078

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308285-11 | **Client Sample Name:** JPL-GW, DUP-2-2Q13, 4/23/2013 11:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0012**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**5.0**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**16**	**ug/L**	**50**	**6.5**	**EPA-200.7**	13	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/24/13	04/24/13 01:54	LS1	KONE-1	1	BWD1917
2	EPA-200.8	04/30/13	04/30/13 21:29	JSS	PE-EL1	1	BWD2396
3	EPA-200.7	04/30/13	04/30/13 17:34	JRG	PE-OP2	1	BWD2358

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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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: BWD2199						
Benzene	BWD2199-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWD2199-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWD2199-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWD2199-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWD2199-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWD2199-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWD2199-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWD2199-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWD2199-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWD2199-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BWD2199-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWD2199-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWD2199-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWD2199-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWD2199-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWD2199-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWD2199-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWD2199-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWD2199-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWD2199-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWD2199-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWD2199-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWD2199-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: BWD2199						
trans-1,3-Dichloropropene	BWD2199-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWD2199-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWD2199-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWD2199-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWD2199-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWD2199-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWD2199-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWD2199-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWD2199-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWD2199-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWD2199-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWD2199-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWD2199-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWD2199-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWD2199-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWD2199-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWD2199-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWD2199-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWD2199-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWD2199-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWD2199-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWD2199-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWD2199-BLK1	ND	ug/L	4.0	0.97	

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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: BWD2199						
Ethyl t-butyl ether	BWD2199-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWD2199-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWD2199-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWD2199-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWD2199-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWD2199-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWD2199-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWD2199-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWD2199-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWD2199-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWD2199-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWD2199-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWD2199-BLK1	109	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWD2199-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWD2199-BLK1	90.2	%	80 - 120 (LCL - UCL)		

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Project: JPL- GW Monitoring Wells
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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: BWD2199										
Benzene	BWD2199-BS1	LCS	26.810	25.000	ug/L	107		70 - 130		
Bromodichloromethane	BWD2199-BS1	LCS	27.650	25.000	ug/L	111		70 - 130		
Chlorobenzene	BWD2199-BS1	LCS	25.110	25.000	ug/L	100		70 - 130		
Chloroethane	BWD2199-BS1	LCS	26.800	25.000	ug/L	107		70 - 130		
1,4-Dichlorobenzene	BWD2199-BS1	LCS	26.890	25.000	ug/L	108		70 - 130		
1,1-Dichloroethane	BWD2199-BS1	LCS	25.440	25.000	ug/L	102		70 - 130		
1,1-Dichloroethene	BWD2199-BS1	LCS	25.400	25.000	ug/L	102		70 - 130		
Toluene	BWD2199-BS1	LCS	26.180	25.000	ug/L	105		70 - 130		
Trichloroethene	BWD2199-BS1	LCS	28.200	25.000	ug/L	113		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWD2199-BS1	LCS	10.760	10.000	ug/L	108		75 - 125		
Toluene-d8 (Surrogate)	BWD2199-BS1	LCS	10.340	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWD2199-BS1	LCS	10.150	10.000	ug/L	102		80 - 120		

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Project: JPL- GW Monitoring Wells
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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: BWD2199	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
Benzene	MS	1308285-08	ND	26.450	25.000	ug/L		106		70 - 130	
	MSD	1308285-08	ND	26.640	25.000	ug/L	0.7	107	20	70 - 130	
Bromodichloromethane	MS	1308285-08	ND	27.870	25.000	ug/L		111		70 - 130	
	MSD	1308285-08	ND	28.190	25.000	ug/L	1.1	113	20	70 - 130	
Chlorobenzene	MS	1308285-08	ND	24.950	25.000	ug/L		99.8		70 - 130	
	MSD	1308285-08	ND	25.470	25.000	ug/L	2.1	102	20	70 - 130	
Chloroethane	MS	1308285-08	ND	26.740	25.000	ug/L		107		70 - 130	
	MSD	1308285-08	ND	26.730	25.000	ug/L	0.0	107	20	70 - 130	
1,4-Dichlorobenzene	MS	1308285-08	ND	26.570	25.000	ug/L		106		70 - 130	
	MSD	1308285-08	ND	27.910	25.000	ug/L	4.9	112	20	70 - 130	
1,1-Dichloroethane	MS	1308285-08	0.23000	25.760	25.000	ug/L		102		70 - 130	
	MSD	1308285-08	0.23000	25.880	25.000	ug/L	0.5	103	20	70 - 130	
1,1-Dichloroethene	MS	1308285-08	ND	25.380	25.000	ug/L		102		70 - 130	
	MSD	1308285-08	ND	25.620	25.000	ug/L	0.9	102	20	70 - 130	
Toluene	MS	1308285-08	ND	25.750	25.000	ug/L		103		70 - 130	
	MSD	1308285-08	ND	26.130	25.000	ug/L	1.5	105	20	70 - 130	
Trichloroethene	MS	1308285-08	1.4900	26.270	25.000	ug/L		99.1		70 - 130	
	MSD	1308285-08	1.4900	26.310	25.000	ug/L	0.2	99.3	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1308285-08	ND	10.680	10.000	ug/L		107		75 - 125	
	MSD	1308285-08	ND	10.890	10.000	ug/L	1.9	109		75 - 125	
Toluene-d8 (Surrogate)	MS	1308285-08	ND	10.220	10.000	ug/L		102		80 - 120	
	MSD	1308285-08	ND	10.180	10.000	ug/L	0.4	102		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1308285-08	ND	10.100	10.000	ug/L		101		80 - 120	
	MSD	1308285-08	ND	10.420	10.000	ug/L	3.1	104		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: BWD2199						
Chloroacetonitrile	BWD2199-BLK1	0	ug/L			
1-Chlorobutane	BWD2199-BLK1	0	ug/L			
1,1-Dichloropropanone	BWD2199-BLK1	0	ug/L			
Methyl acrylate	BWD2199-BLK1	0	ug/L			
Nitrobenzene	BWD2199-BLK1	0	ug/L			
2-Nitropropane	BWD2199-BLK1	0	ug/L			

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWD1884						
Total Dissolved Solids @ 180 C	BWD1884-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWD1918						
Nitrite as N	BWD1918-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWD1948						
Chloride	BWD1948-BLK1	0.26000	mg/L	0.50	0.068	J
Nitrate as N	BWD1948-BLK1	ND	mg/L	0.10	0.021	
Sulfate	BWD1948-BLK1	0.26000	mg/L	1.0	0.13	J
QC Batch ID: BWD2047						
Bicarbonate	BWD2047-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWD2047-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWD2047-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWD2048						
Bicarbonate	BWD2048-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWD2048-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWD2048-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWD2358						
Total Recoverable Calcium	BWD2358-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWD2358-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWD2358-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWD2358-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWE0078						
Perchlorate	BWE0078-BLK1	ND	ug/L	4.0	0.81	

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Project: JPL- GW Monitoring Wells
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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: BWD1884										
Total Dissolved Solids @ 180 C	BWD1884-BS1	LCS	590.00	586.00	mg/L	101		90 - 110		
QC Batch ID: BWD1918										
Nitrite as N	BWD1918-BS1	LCS	0.49028	0.50000	mg/L	98.1		90 - 110		
QC Batch ID: BWD1948										
Chloride	BWD1948-BS1	LCS	52.888	50.000	mg/L	106		90 - 110		
Nitrate as N	BWD1948-BS1	LCS	5.2290	5.0000	mg/L	105		90 - 110		
Sulfate	BWD1948-BS1	LCS	104.94	100.00	mg/L	105		90 - 110		
QC Batch ID: BWD2047										
Total Alkalinity as CaCO3	BWD2047-BS3	LCS	102.69	100.00	mg/L	103		90 - 110		
pH	BWD2047-BS2	LCS	7.0600	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWD2048										
Total Alkalinity as CaCO3	BWD2048-BS3	LCS	98.580	100.00	mg/L	98.6		90 - 110		
pH	BWD2048-BS2	LCS	7.0600	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWD2358										
Total Recoverable Calcium	BWD2358-BS1	LCS	9.9101	10.000	mg/L	99.1		85 - 115		
Total Recoverable Magnesium	BWD2358-BS1	LCS	10.162	10.000	mg/L	102		85 - 115		
Total Recoverable Sodium	BWD2358-BS1	LCS	9.5378	10.000	mg/L	95.4		85 - 115		
Total Recoverable Potassium	BWD2358-BS1	LCS	9.5459	10.000	mg/L	95.5		85 - 115		
QC Batch ID: BWE0078										
Perchlorate	BWE0078-BS1	LCS	11.190	10.000	ug/L	112		85 - 115		

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Project: JPL- GW Monitoring Wells
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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: BWD1884	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
Total Dissolved Solids @ 180 C	DUP	1308285-08	723.33	736.66		mg/L	1.8		10		
QC Batch ID: BWD1918	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
Nitrite as N	DUP	1308285-08	ND	ND		mg/L			10		
	MS	1308285-08	ND	0.51133	0.52632	mg/L		97.2		90 - 110	
	MSD	1308285-08	ND	0.51052	0.52632	mg/L	0.2	97.0	10	90 - 110	
QC Batch ID: BWD1948	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
Chloride	DUP	1308285-08	111.95	112.11		mg/L	0.1		10		
	MS	1308285-08	111.95	218.13	101.01	mg/L		105		80 - 120	
	MSD	1308285-08	111.95	218.97	101.01	mg/L	0.4	106	10	80 - 120	
Nitrate as N	DUP	1308285-08	14.140	14.176		mg/L	0.3		10		
	MS	1308285-08	14.140	24.024	10.101	mg/L		97.9		80 - 120	
	MSD	1308285-08	14.140	24.089	10.101	mg/L	0.3	98.5	10	80 - 120	
Sulfate	DUP	1308285-08	162.79	163.16		mg/L	0.2		10		
	MS	1308285-08	162.79	377.59	202.02	mg/L		106		80 - 120	
	MSD	1308285-08	162.79	379.51	202.02	mg/L	0.5	107	10	80 - 120	
QC Batch ID: BWD2047	Used client sample: N										
Bicarbonate	DUP	1308426-01	248.75	250.42		mg/L	0.7		10		
Carbonate	DUP	1308426-01	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308426-01	204.01	205.38		mg/L	0.7		10		
pH	DUP	1308426-01	7.9200	7.9300		pH Units	0.1		20		
QC Batch ID: BWD2048	Used client sample: Y - Description: MW-14-1, 04/23/2013 13:35										
Bicarbonate	DUP	1308285-10	224.81	225.55		mg/L	0.3		10		
Carbonate	DUP	1308285-10	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308285-10	184.38	184.99		mg/L	0.3		10		
pH	DUP	1308285-10	7.0800	7.1200		pH Units	0.6		20		
QC Batch ID: BWD2358	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
Total Recoverable Calcium	DUP	1308285-08	128.74	131.08		mg/L	1.8		20		
	MS	1308285-08	128.74	136.83	10.000	mg/L		80.9		75 - 125	
	MSD	1308285-08	128.74	136.86	10.000	mg/L	0.0	81.2	20	75 - 125	
Total Recoverable Magnesium	DUP	1308285-08	50.897	51.997		mg/L	2.1		20		
	MS	1308285-08	50.897	59.971	10.000	mg/L		90.7		75 - 125	
	MSD	1308285-08	50.897	59.947	10.000	mg/L	0.0	90.5	20	75 - 125	
Total Recoverable Sodium	DUP	1308285-08	42.895	43.223		mg/L	0.8		20		
	MS	1308285-08	42.895	51.680	10.000	mg/L		87.8		75 - 125	
	MSD	1308285-08	42.895	51.556	10.000	mg/L	0.2	86.6	20	75 - 125	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2358	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
Total Recoverable Potassium	DUP	1308285-08	3.1559	3.1225		mg/L	1.1		20		
	MS	1308285-08	3.1559	12.830	10.000	mg/L		96.7		75 - 125	
	MSD	1308285-08	3.1559	12.796	10.000	mg/L	0.3	96.4	20	75 - 125	
QC Batch ID: BWE0078	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
Perchlorate	DUP	1308285-08	4.7594	4.5200		ug/L	5.2		15		
	MS	1308285-08	4.7594	12.936	10.101	ug/L		80.9		80 - 120	
	MSD	1308285-08	4.7594	13.667	10.101	ug/L	5.5	88.2	15	80 - 120	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD1917						
Hexavalent Chromium	BWD1917-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWD2264						
Total Recoverable Arsenic	BWD2264-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWD2264-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWD2264-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BWD2358						
Total Recoverable Iron	BWD2358-BLK1	13.114	ug/L	50	6.5	J
QC Batch ID: BWD2396						
Total Recoverable Arsenic	BWD2396-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWD2396-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWD2396-BLK1	ND	ug/L	1.0	0.10	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD1917										
Hexavalent Chromium	BWD1917-BS1	LCS	0.049346	0.050000	mg/L	98.7		85 - 115		
QC Batch ID: BWD2264										
Total Recoverable Arsenic	BWD2264-BS1	LCS	102.09	100.00	ug/L	102		85 - 115		
Total Recoverable Chromium	BWD2264-BS1	LCS	42.787	40.000	ug/L	107		85 - 115		
Total Recoverable Lead	BWD2264-BS1	LCS	100.36	100.00	ug/L	100		85 - 115		
QC Batch ID: BWD2358										
Total Recoverable Iron	BWD2358-BS1	LCS	1016.4	1000.0	ug/L	102		85 - 115		
QC Batch ID: BWD2396										
Total Recoverable Arsenic	BWD2396-BS1	LCS	97.189	100.00	ug/L	97.2		85 - 115		
Total Recoverable Chromium	BWD2396-BS1	LCS	39.616	40.000	ug/L	99.0		85 - 115		
Total Recoverable Lead	BWD2396-BS1	LCS	102.96	100.00	ug/L	103		85 - 115		

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD1917	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
Hexavalent Chromium	DUP	1308285-08	ND	ND		mg/L			10		
	MS	1308285-08	ND	0.052558	0.052632	mg/L		99.9		85 - 115	
	MSD	1308285-08	ND	0.053254	0.052632	mg/L	1.3	101	10	85 - 115	
QC Batch ID: BWD2264	Used client sample: N										
Total Recoverable Arsenic	DUP	1308009-01	3.7520	3.5930		ug/L	4.3		20		
	MS	1308009-01	3.7520	103.73	100.00	ug/L		100		70 - 130	
	MSD	1308009-01	3.7520	100.40	100.00	ug/L	3.3	96.6	20	70 - 130	
Total Recoverable Chromium	DUP	1308009-01	0.99700	1.2860		ug/L	25.3		20		J,A02
	MS	1308009-01	0.99700	36.226	40.000	ug/L		88.1		70 - 130	
	MSD	1308009-01	0.99700	35.351	40.000	ug/L	2.4	85.9	20	70 - 130	
Total Recoverable Lead	DUP	1308009-01	ND	ND		ug/L			20		
	MS	1308009-01	ND	91.659	100.00	ug/L		91.7		70 - 130	
	MSD	1308009-01	ND	88.973	100.00	ug/L	3.0	89.0	20	70 - 130	
QC Batch ID: BWD2358	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
Total Recoverable Iron	DUP	1308285-08	99.752	101.13		ug/L	1.4		20		
	MS	1308285-08	99.752	1542.3	1000.0	ug/L		144		75 - 125	Q03
	MSD	1308285-08	99.752	1100.8	1000.0	ug/L	33.4	100	20	75 - 125	Q02
QC Batch ID: BWD2396	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
Total Recoverable Arsenic	DUP	1308285-08	ND	ND		ug/L			20		
	MS	1308285-08	ND	106.94	100.00	ug/L		107		70 - 130	
	MSD	1308285-08	ND	106.85	100.00	ug/L	0.1	107	20	70 - 130	
Total Recoverable Chromium	DUP	1308285-08	ND	ND		ug/L			20		
	MS	1308285-08	ND	34.584	40.000	ug/L		86.5		70 - 130	
	MSD	1308285-08	ND	34.931	40.000	ug/L	1.0	87.3	20	70 - 130	
Total Recoverable Lead	DUP	1308285-08	ND	ND		ug/L			20		
	MS	1308285-08	ND	95.151	100.00	ug/L		95.2		70 - 130	
	MSD	1308285-08	ND	95.129	100.00	ug/L	0.0	95.1	20	70 - 130	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:06
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A02	The difference between duplicate readings is less than the PQL.
Q02	Matrix spike precision is not within the control limits.
Q03	Matrix spike recovery(s) is(are) not within the control limits.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/15/2013

David Conner

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Project:	JPL- GW Monitoring Wells
BC Work Order:	1308396
Invoice ID:	B146168

Enclosed are the results of analyses for samples received by the laboratory on 4/24/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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Chain of Custody and Cooler Receipt Form for 1308396 Page 1 of 3

1308396

BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

Report & Bill to:

Name: Battelle MHTS
Phone: (614) 458-5489
Address: 505 King Ave.
Project: 2Q13 JPL
City: Columbus
Project #:
State: OH
ZIP: 43201
Samplers Name: Andy Wolff
Attn: David Conner

Analysis Requested

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
-1	TB-3-4/24/13	4-24-13	0630	AQ	X	X	X	X	X	X	X	X	X	X	X	X			X	
-2	EB-3-4/24/13		0700		X	X	X	X	X	X	X	X	X	X	X	X			X	
-3	MW-18-5		0730		X	X	X	X	X	X	X	X	X	X	X	X			X	
-4	MW-18-4		0805		X	X	X	X	X	X	X	X	X	X	X	X			X	Level IV
-5	MW-18-3		1020		X	X	X	X	X	X	X	X	X	X	X	X			X	
-6	MW-18-2		1050		X	X	X	X	X	X	X	X	X	X	X	X			X	
-7	MW-18-1		1120		X	X	X	X	X	X	X	X	X	X	X	X			X	
-8	MW-25-5		1235		X	X	X	X	X	X	X	X	X	X	X	X			X	
-9	MW-25-4		1305		X	X	X	X	X	X	X	X	X	X	X	X			X	
-10	MW-25-3		1335		X	X	X	X	X	X	X	X	X	X	X	X			X	
-11	MW-25-2		1405		X	X	X	X	X	X	X	X	X	X	X	X			X	
-12	MW-25-1		1440		X	X	X	X	X	X	X	X	X	X	X	X			X	MS/MSD

Relinquished by: (Signature) Date & Time
Received by: (Signature) Date & Time
Relinquished by: (Signature) Date & Time
Received by: (Signature) Date & Time
Relinquished by: (Signature) Date & Time
Received By: Date & Time

Andy Wolff 4/24/13 1600
Nicole 4-24-13 1625
SAS 4/24/13 2020

CHK BY
DISTRIBUTION
SUB OUT

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

Chain of Custody and Cooler Receipt Form for 1308396 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 09/17/12 Page 1 Of 2

Submission #: 1308396

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☑ None ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____	Box ☐ Other ☐ (Specify)_____

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

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

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

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: Qt PE Thermometer ID: 207 Date/Time 4/24/13 2020

Temperature: (A) 4.1 °C / (C) 4.0 °C Analyst Init SAS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL		B	B	B	B	B	B	B	B	B
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		C	C	C	C	C	C	C	C	C
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A 1									
40ml VOA VIAL		A 3	A 3	A 3	A 3	A 3	A 3	A 3	A 3	A 3
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SOIL KIT										

Comments:

Sample Receiving Completed By: SAS Date/Time 4/24/13 2235

Chain of Custody and Cooler Receipt Form for 1308396 Page 3 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 12 05/17/12 Page 2 Of 2

Submission #: 1308396

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

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

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

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

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

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: Qt PE Thermometer ID: 207 Date/Time 4/24/13 2020

Temperature: (A) 4.1 °C / (C) 4.0 °C Analyst Init SAS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL	B	B								
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C	C								
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A - 3	A - 6								
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
[illegible]										
[illegible]										

[illegible] SAS [illegible] 4/24/13 2235

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308396-01	**COC Number:**	---	**Receive Date:**	04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2013 06:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-3-42413	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-3-42413	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308396-02	**COC Number:**	---	**Receive Date:**	04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2013 07:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-3-42413	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-3-42413	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308396-03	**COC Number:**	---	**Receive Date:**	04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2013 07:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-18-5	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-18-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1308396-04	**COC Number:**	---	**Receive Date:** 04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:** 04/24/2013 08:05
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-18-4	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-18-4
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308396-05	**COC Number:**	---	**Receive Date:** 04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:** 04/24/2013 10:20
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-18-3	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-18-3
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308396-06	**COC Number:**	---	**Receive Date:** 04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:** 04/24/2013 10:50
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-18-2	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-18-2
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1308396-07	**COC Number:**	---	**Receive Date:** 04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:** 04/24/2013 11:20
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-18-1	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-18-1
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308396-08	**COC Number:**	---	**Receive Date:** 04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:** 04/24/2013 12:35
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-25-5	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-25-5
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308396-09	**COC Number:**	---	**Receive Date:** 04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:** 04/24/2013 13:05
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-25-4	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			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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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308396-10	**COC Number:**	---	**Receive Date:**	04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2013 13:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-3	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-25-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308396-11	**COC Number:**	---	**Receive Date:**	04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2013 14:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-2	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-25-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308396-12	**COC Number:**	---	**Receive Date:**	04/24/2013 20:20
	Project Number:	JPL-GW	**Sampling Date:**	04/24/2013 14:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-25-1	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			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: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-01 | **Client Sample Name:** JPL-GW, TB-3-42413, 4/24/2013 6:30:00AM, Andy Wolff

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

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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-01 | **Client Sample Name:** JPL-GW, TB-3-42413, 4/24/2013 6:30:00AM, Andy Wolff

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

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-01 | **Client Sample Name:** JPL-GW, TB-3-42413, 4/24/2013 6:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 11:19	MGC	MS-V5	1	BWD2200

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-01 | **Client Sample Name:** JPL-GW, TB-3-42413, 4/24/2013 6:30:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 11:19	MGC	MS-V5	1	BWD2200

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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-02 | **Client Sample Name:** JPL-GW, EB-3-42413, 4/24/2013 7:00:00AM, Andy Wolff

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

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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-02 | **Client Sample Name:** JPL-GW, EB-3-42413, 4/24/2013 7:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-02 | **Client Sample Name:** JPL-GW, EB-3-42413, 4/24/2013 7:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 11:42	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-02 | **Client Sample Name:** JPL-GW, EB-3-42413, 4/24/2013 7:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 11:42	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308396-02 | **Client Sample Name:** JPL-GW, EB-3-42413, 4/24/2013 7:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	ND	mg/L	0.50	0.17	EPA-200.7	ND		1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.27**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14	**J**	3
Nitrate as N	**0.22**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	ND	mg/L	1.0	0.18	EPA-300.0	ND		3
pH	**5.54**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/13	05/01/13 17:25	JRG	PE-OP2	1	BWE0047
2	SM-2320B	04/29/13	04/29/13 15:01	FRP	MET-1	1	BWD2322
3	EPA-300.0	04/24/13	04/25/13 03:44	LD1	IC5	1	BWD1971
4	EPA-150.1	04/29/13	04/29/13 15:01	FRP	MET-1	1	BWD2322
5	EPA-160.1	04/25/13	04/25/13 08:50	NW1	MANUAL	0.667	BWD1988
6	EPA-353.2	04/25/13	04/25/13 09:17	TDC	KONE-1	1	BWD2153
7	EPA-314.0	05/03/13	05/03/13 11:26	LD1	IC6	1	BWE0360

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308396-02 | **Client Sample Name:** JPL-GW, EB-3-42413, 4/24/2013 7:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 01:08	LS1	KONE-1	1	BWD2141
2	EPA-200.8	05/02/13	05/02/13 18:34	SRM	PE-EL1	1	BWE0145
3	EPA-200.7	05/01/13	05/01/13 17:25	JRG	PE-OP2	1	BWE0047

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/24/2013 7:30:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/24/2013 7:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.070**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/24/2013 7:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 12:04	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/24/2013 7:30:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 12:04	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308396-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/24/2013 7:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**13**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**5.0**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**53**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.14		1
Bicarbonate	**160**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**6.4**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**140**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**11**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	0.025	mg/L	0.10	0.025	EPA-300.0	ND	J	3
Sulfate	**6.6**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.60**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**180**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/13	05/02/13 12:53	JRG	PE-OP2	1	BWE0048
2	SM-2320B	04/29/13	04/29/13 15:06	FRP	MET-1	1	BWD2322
3	EPA-300.0	04/24/13	04/25/13 07:45	LD1	IC5	1	BWD1973
4	EPA-150.1	04/29/13	04/29/13 15:06	FRP	MET-1	1	BWD2322
5	EPA-160.1	04/25/13	04/25/13 08:50	NW1	MANUAL	2	BWD1988
6	EPA-353.2	04/25/13	04/25/13 09:26	TDC	KONE-1	1	BWD2153
7	EPA-314.0	05/03/13	05/03/13 11:39	LD1	IC6	1	BWE0360

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308396-03 | **Client Sample Name:** JPL-GW, MW-18-5, 4/24/2013 7:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.3**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**50**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 01:08	LS1	KONE-1	1	BWD2141
2	EPA-200.8	05/02/13	05/02/13 18:37	SRM	PE-EL1	1	BWE0145
3	EPA-200.7	05/01/13	05/02/13 12:53	JRG	PE-OP2	1	BWE0048

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/24/2013 8:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**1.0**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.61**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/24/2013 8:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.50**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.59**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/24/2013 8:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 12:27	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/24/2013 8:05:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 12:27	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308396-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/24/2013 8:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**39**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**11**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**32**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.14		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**9.2**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**0.87**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**23**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.20**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**240**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**12**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/13	05/02/13 13:00	JRG	PE-OP2	1	BWE0048
2	SM-2320B	04/29/13	04/29/13 15:12	FRP	MET-1	1	BWD2322
3	EPA-300.0	04/24/13	04/25/13 07:58	LD1	IC5	1	BWD1973
4	EPA-150.1	04/29/13	04/29/13 15:12	FRP	MET-1	1	BWD2322
5	EPA-160.1	04/25/13	04/25/13 08:50	NW1	MANUAL	2	BWD1988
6	EPA-353.2	04/25/13	04/25/13 09:23	TDC	KONE-1	1	BWD2155
7	EPA-314.0	05/03/13	05/03/13 11:53	LD1	IC6	1	BWE0360

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308396-04 | **Client Sample Name:** JPL-GW, MW-18-4, 4/24/2013 8:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.2**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**98**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 01:08	LS1	KONE-1	1	BWD2141
2	EPA-200.8	05/02/13	05/02/13 18:40	SRM	PE-EL1	1	BWE0145
3	EPA-200.7	05/01/13	05/02/13 13:00	JRG	PE-OP2	1	BWE0048

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/24/2013 10:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**7.3**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**1.5**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/24/2013 10:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.17**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.73**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.18**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/24/2013 10:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 12:49	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/24/2013 10:20:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 12:49	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308396-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/24/2013 10:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**63**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**19**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**24**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.14		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**20**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**1.8**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**37**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.03**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**320**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**36**	**ug/L**	**8.0**	**1.6**	**EPA-314.0**	ND	**A01**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/13	05/02/13 13:02	JRG	PE-OP2	1	BWE0048
2	SM-2320B	04/29/13	04/29/13 15:18	FRP	MET-1	1	BWD2322
3	EPA-300.0	04/24/13	04/25/13 08:38	LD1	IC5	1	BWD1973
4	EPA-150.1	04/29/13	04/29/13 15:18	FRP	MET-1	1	BWD2322
5	EPA-160.1	04/25/13	04/25/13 08:50	NW1	MANUAL	2	BWD1988
6	EPA-353.2	04/25/13	04/25/13 09:17	TDC	KONE-1	1	BWD2153
7	EPA-314.0	05/03/13	05/03/13 14:32	LD1	IC6	2	BWE0360

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308396-05 | **Client Sample Name:** JPL-GW, MW-18-3, 4/24/2013 10:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.00095**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**2.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**35**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 08:00	TDC	KONE-1	1	BWD2142
2	EPA-200.8	05/02/13	05/02/13 18:44	SRM	PE-EL1	1	BWE0145
3	EPA-200.7	05/01/13	05/02/13 13:02	JRG	PE-OP2	1	BWE0048

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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/24/2013 10:50:00AM, Andy Wolff

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

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505 King Ave.
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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/24/2013 10:50:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/24/2013 10:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 13:12	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/24/2013 10:50:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 13:12	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308396-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/24/2013 10:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**50**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**17**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**20**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.14		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**8.8**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**0.59**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**24**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.74**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**260**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/13	05/02/13 13:05	JRG	PE-OP2	1	BWE0048
2	SM-2320B	04/29/13	04/29/13 15:25	FRP	MET-1	1	BWD2322
3	EPA-300.0	04/24/13	04/25/13 08:52	LD1	IC5	1	BWD1973
4	EPA-150.1	04/29/13	04/29/13 15:25	FRP	MET-1	1	BWD2322
5	EPA-160.1	04/25/13	04/25/13 08:50	NW1	MANUAL	2	BWD1988
6	EPA-353.2	04/25/13	04/25/13 09:17	TDC	KONE-1	1	BWD2153
7	EPA-314.0	05/03/13	05/03/13 12:19	LD1	IC6	1	BWE0360

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308396-06 | **Client Sample Name:** JPL-GW, MW-18-2, 4/24/2013 10:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**0.88**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**400**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 08:00	TDC	KONE-1	1	BWD2142
2	EPA-200.8	05/02/13	05/02/13 18:47	SRM	PE-EL1	1	BWE0145
3	EPA-200.7	05/01/13	05/02/13 13:05	JRG	PE-OP2	1	BWE0048

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-07 | **Client Sample Name:** JPL-GW, MW-18-1, 4/24/2013 11:20:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-07 | **Client Sample Name:** JPL-GW, MW-18-1, 4/24/2013 11:20:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-07 | **Client Sample Name:** JPL-GW, MW-18-1, 4/24/2013 11:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 13:34	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-07 | **Client Sample Name:** JPL-GW, MW-18-1, 4/24/2013 11:20:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 13:34	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308396-07 | **Client Sample Name:** JPL-GW, MW-18-1, 4/24/2013 11:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**44**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**15**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**19**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.14		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**7.4**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**0.32**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**26**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.58**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**240**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/13	05/02/13 13:07	JRG	PE-OP2	1	BWE0048
2	SM-2320B	04/29/13	04/29/13 15:48	FRP	MET-1	1	BWD2323
3	EPA-300.0	04/24/13	04/25/13 09:05	LD1	IC5	1	BWD1973
4	EPA-150.1	04/29/13	04/29/13 15:48	FRP	MET-1	1	BWD2323
5	EPA-160.1	04/25/13	04/25/13 08:50	NW1	MANUAL	2	BWD1988
6	EPA-353.2	04/25/13	04/25/13 09:17	TDC	KONE-1	1	BWD2153
7	EPA-314.0	05/03/13	05/03/13 12:33	LD1	IC6	1	BWE0360

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308396-07 | **Client Sample Name:** JPL-GW, MW-18-1, 4/24/2013 11:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0040	0.0014	EPA-7196	ND	A10	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**420**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	**0.72**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 08:33	TDC	KONE-1	1	BWD2142
2	EPA-200.8	05/02/13	05/02/13 18:50	SRM	PE-EL1	1	BWE0145
3	EPA-200.7	05/01/13	05/02/13 13:07	JRG	PE-OP2	1	BWE0048

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-08 | **Client Sample Name:** JPL-GW, MW-25-5, 4/24/2013 12:35:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-08 | **Client Sample Name:** JPL-GW, MW-25-5, 4/24/2013 12:35:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-08 | **Client Sample Name:** JPL-GW, MW-25-5, 4/24/2013 12:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 13:57	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-08 | **Client Sample Name:** JPL-GW, MW-25-5, 4/24/2013 12:35:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 13:57	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308396-08 | **Client Sample Name:** JPL-GW, MW-25-5, 4/24/2013 12:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**7.1**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**4.6**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**62**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.14		1
Bicarbonate	**74**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**12**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**80**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**17**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.025	EPA-300.0	ND		3
Sulfate	**62**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**9.16**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**220**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/13	05/02/13 13:10	JRG	PE-OP2	1	BWE0048
2	SM-2320B	04/29/13	04/29/13 16:02	FRP	MET-1	1	BWD2323
3	EPA-300.0	04/24/13	04/25/13 09:19	LD1	IC5	1	BWD1973
4	EPA-150.1	04/29/13	04/29/13 16:02	FRP	MET-1	1	BWD2323
5	EPA-160.1	04/25/13	04/25/13 08:50	NW1	MANUAL	2	BWD1988
6	EPA-353.2	04/25/13	04/25/13 09:17	TDC	KONE-1	1	BWD2153
7	EPA-314.0	05/03/13	05/03/13 12:46	LD1	IC6	1	BWE0360

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308396-08 | **Client Sample Name:** JPL-GW, MW-25-5, 4/24/2013 12:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**2.1**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**12**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	**0.37**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 08:00	TDC	KONE-1	1	BWD2142
2	EPA-200.8	05/02/13	05/02/13 19:01	SRM	PE-EL1	1	BWE0145
3	EPA-200.7	05/01/13	05/02/13 13:10	JRG	PE-OP2	1	BWE0048

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-09 | **Client Sample Name:** JPL-GW, MW-25-4, 4/24/2013 1:05:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-09 | **Client Sample Name:** JPL-GW, MW-25-4, 4/24/2013 1:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.51**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-09 | **Client Sample Name:** JPL-GW, MW-25-4, 4/24/2013 1:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 14:20	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-09 | **Client Sample Name:** JPL-GW, MW-25-4, 4/24/2013 1:05:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 14:20	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308396-09 | **Client Sample Name:** JPL-GW, MW-25-4, 4/24/2013 1:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**83**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**24**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**52**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.14		1
Bicarbonate	**280**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**230**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**54**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**6.1**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**80**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.95**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**490**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**7.3**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/13	05/02/13 13:12	JRG	PE-OP2	1	BWE0048
2	SM-2320B	04/29/13	04/29/13 16:08	FRP	MET-1	1	BWD2323
3	EPA-300.0	04/24/13	04/25/13 09:32	LD1	IC5	1	BWD1973
4	EPA-150.1	04/29/13	04/29/13 16:08	FRP	MET-1	1	BWD2323
5	EPA-160.1	04/25/13	04/25/13 08:50	NW1	MANUAL	3.333	BWD1988
6	EPA-353.2	04/25/13	04/25/13 09:17	TDC	KONE-1	1	BWD2153
7	EPA-314.0	05/03/13	05/03/13 13:26	LD1	IC6	1	BWE0360

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308396-09 | **Client Sample Name:** JPL-GW, MW-25-4, 4/24/2013 1:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**0.78**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**130**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 08:04	TDC	KONE-1	1	BWD2142
2	EPA-200.8	05/02/13	05/02/13 19:04	SRM	PE-EL1	1	BWE0145
3	EPA-200.7	05/01/13	05/02/13 13:12	JRG	PE-OP2	1	BWE0048

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-10 | **Client Sample Name:** JPL-GW, MW-25-3, 4/24/2013 1:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.35**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-10 | **Client Sample Name:** JPL-GW, MW-25-3, 4/24/2013 1:35:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-10 | **Client Sample Name:** JPL-GW, MW-25-3, 4/24/2013 1:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 14:42	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-10 | **Client Sample Name:** JPL-GW, MW-25-3, 4/24/2013 1:35:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 14:42	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308396-10 | **Client Sample Name:** JPL-GW, MW-25-3, 4/24/2013 1:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**73**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**23**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**35**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.14		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**40**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**9.3**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**61**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.94**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**410**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**8.4**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/13	05/02/13 13:15	JRG	PE-OP2	1	BWE0048
2	SM-2320B	04/29/13	04/29/13 16:15	FRP	MET-1	1	BWD2323
3	EPA-300.0	04/24/13	04/25/13 09:45	LD1	IC5	1	BWD1973
4	EPA-150.1	04/29/13	04/29/13 16:15	FRP	MET-1	1	BWD2323
5	EPA-160.1	04/25/13	04/25/13 08:50	NW1	MANUAL	2	BWD1988
6	EPA-353.2	04/25/13	04/25/13 09:17	TDC	KONE-1	1	BWD2153
7	EPA-314.0	05/03/13	05/03/13 13:39	LD1	IC6	1	BWE0360

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308396-10 | **Client Sample Name:** JPL-GW, MW-25-3, 4/24/2013 1:35:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0022**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	**0.93**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**3.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**9.6**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	**0.23**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 08:33	TDC	KONE-1	1	BWD2142
2	EPA-200.8	05/02/13	05/02/13 19:07	SRM	PE-EL1	1	BWE0145
3	EPA-200.7	05/01/13	05/02/13 13:15	JRG	PE-OP2	1	BWE0048

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-11 | **Client Sample Name:** JPL-GW, MW-25-2, 4/24/2013 2:05:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-11 | **Client Sample Name:** JPL-GW, MW-25-2, 4/24/2013 2:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.22**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-11 | **Client Sample Name:** JPL-GW, MW-25-2, 4/24/2013 2:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 15:05	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-11 | **Client Sample Name:** JPL-GW, MW-25-2, 4/24/2013 2:05:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 15:05	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308396-11 | **Client Sample Name:** JPL-GW, MW-25-2, 4/24/2013 2:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**80**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**27**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**33**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.14		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**45**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**9.2**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**77**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.93**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**450**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**14**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/13	05/02/13 13:17	JRG	PE-OP2	1	BWE0048
2	SM-2320B	04/29/13	04/29/13 16:21	FRP	MET-1	1	BWD2323
3	EPA-300.0	04/24/13	04/25/13 09:59	LD1	IC5	1	BWD1973
4	EPA-150.1	04/29/13	04/29/13 16:21	FRP	MET-1	1	BWD2323
5	EPA-160.1	04/25/13	04/25/13 08:50	NW1	MANUAL	2	BWD1988
6	EPA-353.2	04/25/13	04/25/13 09:17	TDC	KONE-1	1	BWD2153
7	EPA-314.0	05/03/13	05/03/13 13:52	LD1	IC6	1	BWE0360

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308396-11 | **Client Sample Name:** JPL-GW, MW-25-2, 4/24/2013 2:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0015**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**0.76**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.8**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**86**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 08:04	TDC	KONE-1	1	BWD2142
2	EPA-200.8	05/06/13	05/06/13 16:36	SRM	PE-EL1	1	BWE0409
3	EPA-200.7	05/01/13	05/02/13 13:17	JRG	PE-OP2	1	BWE0048

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-12 | **Client Sample Name:** JPL-GW, MW-25-1, 4/24/2013 2:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.39**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-12 | **Client Sample Name:** JPL-GW, MW-25-1, 4/24/2013 2:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	**0.18**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**1.3**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308396-12 | **Client Sample Name:** JPL-GW, MW-25-1, 4/24/2013 2:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 08:41	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308396-12 | **Client Sample Name:** JPL-GW, MW-25-1, 4/24/2013 2:40:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 08:41	MGC	MS-V5	1	BWD2200

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308396-12 | **Client Sample Name:** JPL-GW, MW-25-1, 4/24/2013 2:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**97**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**32**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**35**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.14		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**68**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**9.3**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**130**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.53**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**550**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**9.2**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/01/13	05/02/13 12:38	JRG	PE-OP2	1	BWE0048
2	SM-2320B	04/29/13	04/29/13 16:27	FRP	MET-1	1	BWD2323
3	EPA-300.0	04/24/13	04/25/13 06:51	LD1	IC5	1	BWD1973
4	EPA-150.1	04/29/13	04/29/13 16:27	FRP	MET-1	1	BWD2323
5	EPA-160.1	04/25/13	04/25/13 09:40	NW1	MANUAL	3.333	BWD1989
6	EPA-353.2	04/25/13	04/25/13 09:17	TDC	KONE-1	1	BWD2153
7	EPA-314.0	05/03/13	05/03/13 14:06	LD1	IC6	1	BWE0361

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308396-12 | **Client Sample Name:** JPL-GW, MW-25-1, 4/24/2013 2:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.6**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**560**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 08:00	TDC	KONE-1	1	BWD2142
2	EPA-200.8	05/02/13	05/02/13 18:04	SRM	PE-EL1	1	BWE0145
3	EPA-200.7	05/01/13	05/02/13 12:38	JRG	PE-OP2	1	BWE0048

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2200						
Benzene	BWD2200-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWD2200-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWD2200-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWD2200-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWD2200-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWD2200-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWD2200-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWD2200-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWD2200-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWD2200-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWD2200-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWD2200-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWD2200-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWD2200-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWD2200-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWD2200-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BWD2200-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWD2200-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWD2200-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWD2200-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWD2200-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWD2200-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWD2200-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWD2200-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWD2200-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWD2200-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWD2200-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWD2200-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWD2200-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWD2200-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWD2200-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWD2200-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWD2200-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWD2200-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: BWD2200						
trans-1,3-Dichloropropene	BWD2200-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWD2200-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWD2200-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWD2200-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWD2200-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWD2200-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWD2200-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWD2200-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWD2200-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWD2200-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWD2200-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWD2200-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWD2200-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWD2200-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWD2200-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWD2200-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BWD2200-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWD2200-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWD2200-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWD2200-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWD2200-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWD2200-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWD2200-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWD2200-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWD2200-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWD2200-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWD2200-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWD2200-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWD2200-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWD2200-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWD2200-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWD2200-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWD2200-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWD2200-BLK1	ND	ug/L	4.0	0.97	

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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: BWD2200						
Ethyl t-butyl ether	BWD2200-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWD2200-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWD2200-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWD2200-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWD2200-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWD2200-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWD2200-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWD2200-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWD2200-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWD2200-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWD2200-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWD2200-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWD2200-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWD2200-BLK1	109	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWD2200-BLK1	103	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWD2200-BLK1	91.7	%	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: BWD2200										
Benzene	BWD2200-BS1	LCS	27.260	25.000	ug/L	109		70 - 130		
Bromodichloromethane	BWD2200-BS1	LCS	28.020	25.000	ug/L	112		70 - 130		
Chlorobenzene	BWD2200-BS1	LCS	26.770	25.000	ug/L	107		70 - 130		
Chloroethane	BWD2200-BS1	LCS	27.710	25.000	ug/L	111		70 - 130		
1,4-Dichlorobenzene	BWD2200-BS1	LCS	28.720	25.000	ug/L	115		70 - 130		
1,1-Dichloroethane	BWD2200-BS1	LCS	26.030	25.000	ug/L	104		70 - 130		
1,1-Dichloroethene	BWD2200-BS1	LCS	26.050	25.000	ug/L	104		70 - 130		
Toluene	BWD2200-BS1	LCS	27.250	25.000	ug/L	109		70 - 130		
Trichloroethene	BWD2200-BS1	LCS	25.990	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWD2200-BS1	LCS	10.430	10.000	ug/L	104		75 - 125		
Toluene-d8 (Surrogate)	BWD2200-BS1	LCS	10.210	10.000	ug/L	102		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWD2200-BS1	LCS	10.220	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: BWD2200	Used client sample: Y - Description: MW-25-1, 04/24/2013 14:40										
Benzene	MS	1308396-12	ND	27.590	25.000	ug/L		110		70 - 130	
	MSD	1308396-12	ND	26.580	25.000	ug/L	3.7	106	20	70 - 130	
Bromodichloromethane	MS	1308396-12	ND	28.820	25.000	ug/L		115		70 - 130	
	MSD	1308396-12	ND	28.140	25.000	ug/L	2.4	113	20	70 - 130	
Chlorobenzene	MS	1308396-12	ND	26.690	25.000	ug/L		107		70 - 130	
	MSD	1308396-12	ND	25.520	25.000	ug/L	4.5	102	20	70 - 130	
Chloroethane	MS	1308396-12	ND	28.590	25.000	ug/L		114		70 - 130	
	MSD	1308396-12	ND	27.880	25.000	ug/L	2.5	112	20	70 - 130	
1,4-Dichlorobenzene	MS	1308396-12	ND	29.770	25.000	ug/L		119		70 - 130	
	MSD	1308396-12	ND	28.410	25.000	ug/L	4.7	114	20	70 - 130	
1,1-Dichloroethane	MS	1308396-12	ND	26.350	25.000	ug/L		105		70 - 130	
	MSD	1308396-12	ND	25.810	25.000	ug/L	2.1	103	20	70 - 130	
1,1-Dichloroethene	MS	1308396-12	ND	26.840	25.000	ug/L		107		70 - 130	
	MSD	1308396-12	ND	25.900	25.000	ug/L	3.6	104	20	70 - 130	
Toluene	MS	1308396-12	ND	26.900	25.000	ug/L		108		70 - 130	
	MSD	1308396-12	ND	26.560	25.000	ug/L	1.3	106	20	70 - 130	
Trichloroethene	MS	1308396-12	1.2900	27.730	25.000	ug/L		106		70 - 130	
	MSD	1308396-12	1.2900	26.640	25.000	ug/L	4.0	101	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1308396-12	ND	10.370	10.000	ug/L		104		75 - 125	
	MSD	1308396-12	ND	10.500	10.000	ug/L	1.2	105		75 - 125	
Toluene-d8 (Surrogate)	MS	1308396-12	ND	10.110	10.000	ug/L		101		80 - 120	
	MSD	1308396-12	ND	10.190	10.000	ug/L	0.8	102		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1308396-12	ND	10.640	10.000	ug/L		106		80 - 120	
	MSD	1308396-12	ND	10.500	10.000	ug/L	1.3	105		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: BWD2200						
Chloroacetonitrile	BWD2200-BLK1	0	ug/L			
1-Chlorobutane	BWD2200-BLK1	0	ug/L			
1,1-Dichloropropanone	BWD2200-BLK1	0	ug/L			
Methyl acrylate	BWD2200-BLK1	0	ug/L			
Nitrobenzene	BWD2200-BLK1	0	ug/L			
2-Nitropropane	BWD2200-BLK1	0	ug/L			

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWD1971						
Chloride	BWD1971-BLK1	0.14200	mg/L	0.50	0.067	J
Nitrate as N	BWD1971-BLK1	ND	mg/L	0.10	0.025	
Sulfate	BWD1971-BLK1	ND	mg/L	1.0	0.18	
QC Batch ID: BWD1973						
Chloride	BWD1973-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	BWD1973-BLK1	ND	mg/L	0.10	0.025	
Sulfate	BWD1973-BLK1	ND	mg/L	1.0	0.18	
QC Batch ID: BWD1988						
Total Dissolved Solids @ 180 C	BWD1988-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWD1989						
Total Dissolved Solids @ 180 C	BWD1989-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWD2153						
Nitrite as N	BWD2153-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWD2155						
Nitrite as N	BWD2155-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWD2322						
Bicarbonate	BWD2322-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWD2322-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWD2322-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWD2323						
Bicarbonate	BWD2323-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWD2323-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWD2323-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0047						
Total Recoverable Calcium	BWE0047-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0047-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0047-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0047-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWE0048						
Total Recoverable Calcium	BWE0048-BLK1	ND	mg/L	0.10	0.018	

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0048						
Total Recoverable Magnesium	BWE0048-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0048-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0048-BLK1	0.13735	mg/L	1.0	0.10	J
QC Batch ID: BWE0360						
Perchlorate	BWE0360-BLK1	ND	ug/L	4.0	0.81	
QC Batch ID: BWE0361						
Perchlorate	BWE0361-BLK1	ND	ug/L	4.0	0.81	

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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: BWD1971										
Chloride	BWD1971-BS1	LCS	51.513	50.000	mg/L	103		90 - 110		
Nitrate as N	BWD1971-BS1	LCS	5.0710	5.0000	mg/L	101		90 - 110		
Sulfate	BWD1971-BS1	LCS	102.25	100.00	mg/L	102		90 - 110		
QC Batch ID: BWD1973										
Chloride	BWD1973-BS1	LCS	51.932	50.000	mg/L	104		90 - 110		
Nitrate as N	BWD1973-BS1	LCS	5.1220	5.0000	mg/L	102		90 - 110		
Sulfate	BWD1973-BS1	LCS	103.32	100.00	mg/L	103		90 - 110		
QC Batch ID: BWD1988										
Total Dissolved Solids @ 180 C	BWD1988-BS1	LCS	560.00	586.00	mg/L	95.6		90 - 110		
QC Batch ID: BWD1989										
Total Dissolved Solids @ 180 C	BWD1989-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
QC Batch ID: BWD2153										
Nitrite as N	BWD2153-BS1	LCS	0.49322	0.50000	mg/L	98.6		90 - 110		
QC Batch ID: BWD2155										
Nitrite as N	BWD2155-BS1	LCS	0.48804	0.50000	mg/L	97.6		90 - 110		
QC Batch ID: BWD2322										
Total Alkalinity as CaCO3	BWD2322-BS3	LCS	101.17	100.00	mg/L	101		90 - 110		
pH	BWD2322-BS2	LCS	7.0400	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWD2323										
Total Alkalinity as CaCO3	BWD2323-BS3	LCS	100.41	100.00	mg/L	100		90 - 110		
pH	BWD2323-BS2	LCS	7.0400	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0047										
Total Recoverable Calcium	BWE0047-BS1	LCS	10.500	10.000	mg/L	105		85 - 115		
Total Recoverable Magnesium	BWE0047-BS1	LCS	10.631	10.000	mg/L	106		85 - 115		
Total Recoverable Sodium	BWE0047-BS1	LCS	10.414	10.000	mg/L	104		85 - 115		
Total Recoverable Potassium	BWE0047-BS1	LCS	9.9502	10.000	mg/L	99.5		85 - 115		
QC Batch ID: BWE0048										
Total Recoverable Calcium	BWE0048-BS1	LCS	10.208	10.000	mg/L	102		85 - 115		
Total Recoverable Magnesium	BWE0048-BS1	LCS	10.383	10.000	mg/L	104		85 - 115		
Total Recoverable Sodium	BWE0048-BS1	LCS	10.142	10.000	mg/L	101		85 - 115		
Total Recoverable Potassium	BWE0048-BS1	LCS	9.8689	10.000	mg/L	98.7		85 - 115		
QC Batch ID: BWE0360										

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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: BWE0360										
Perchlorate	BWE0360-BS1	LCS	10.455	10.000	ug/L	105		85 - 115		
QC Batch ID: BWE0361										
Perchlorate	BWE0361-BS1	LCS	10.498	10.000	ug/L	105		85 - 115		

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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: BWD1971	Used client sample: N										
Chloride	DUP	1308394-01	9.6010	9.5050		mg/L	1.0		10		
	MS	1308394-01	9.6010	64.849	50.505	mg/L		109		80 - 120	
	MSD	1308394-01	9.6010	64.795	50.505	mg/L	0.1	109	10	80 - 120	
Nitrate as N	DUP	1308394-01	ND	ND		mg/L			10		
	MS	1308394-01	ND	5.2071	5.0505	mg/L		103		80 - 120	
	MSD	1308394-01	ND	5.2343	5.0505	mg/L	0.5	104	10	80 - 120	
Sulfate	DUP	1308394-01	27.079	26.970		mg/L	0.4		10		
	MS	1308394-01	27.079	136.47	101.01	mg/L		108		80 - 120	
	MSD	1308394-01	27.079	136.34	101.01	mg/L	0.1	108	10	80 - 120	
QC Batch ID: BWD1973	Used client sample: Y - Description: MW-25-1, 04/24/2013 14:40										
Chloride	DUP	1308396-12	68.276	68.331		mg/L	0.1		10		
	MS	1308396-12	68.276	121.89	50.505	mg/L		106		80 - 120	
	MSD	1308396-12	68.276	121.77	50.505	mg/L	0.1	106	10	80 - 120	
Nitrate as N	DUP	1308396-12	9.2610	9.2830		mg/L	0.2		10		
	MS	1308396-12	9.2610	14.498	5.0505	mg/L		104		80 - 120	
	MSD	1308396-12	9.2610	14.452	5.0505	mg/L	0.3	103	10	80 - 120	
Sulfate	DUP	1308396-12	134.14	133.73		mg/L	0.3		10		
	MS	1308396-12	134.14	243.48	101.01	mg/L		108		80 - 120	
	MSD	1308396-12	134.14	242.73	101.01	mg/L	0.3	108	10	80 - 120	
QC Batch ID: BWD1988	Used client sample: Y - Description: MW-18-5, 04/24/2013 07:30										
Total Dissolved Solids @ 180 C	DUP	1308396-03	182.00	190.00		mg/L	4.3		10		
QC Batch ID: BWD1989	Used client sample: Y - Description: MW-25-1, 04/24/2013 14:40										
Total Dissolved Solids @ 180 C	DUP	1308396-12	549.99	539.99		mg/L	1.8		10		
QC Batch ID: BWD2153	Used client sample: Y - Description: MW-25-1, 04/24/2013 14:40										
Nitrite as N	DUP	1308396-12	ND	ND		mg/L			10		
	MS	1308396-12	ND	0.58153	0.52632	mg/L		110		90 - 110	
	MSD	1308396-12	ND	0.59282	0.52632	mg/L	1.9	113	10	90 - 110	Q03
QC Batch ID: BWD2155	Used client sample: Y - Description: MW-18-4, 04/24/2013 08:05										
Nitrite as N	DUP	1308396-04	ND	ND		mg/L			10		
	MS	1308396-04	ND	0.53002	0.52632	mg/L		101		90 - 110	
	MSD	1308396-04	ND	0.51797	0.52632	mg/L	2.3	98.4	10	90 - 110	
QC Batch ID: BWD2322	Used client sample: N										
Bicarbonate	DUP	1308387-02	357.63	359.11		mg/L	0.4		10		
Carbonate	DUP	1308387-02	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308387-02	293.31	294.53		mg/L	0.4		10		
pH	DUP	1308387-02	7.4000	7.4000		pH Units	0		20		

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2323	Used client sample: Y - Description: MW-18-1, 04/24/2013 11:20										
Bicarbonate	DUP	1308396-07	196.26	196.99		mg/L	0.4		10		
Carbonate	DUP	1308396-07	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308396-07	160.96	161.56		mg/L	0.4		10		
pH	DUP	1308396-07	7.5800	7.5600		pH Units	0.3		20		
QC Batch ID: BWE0047	Used client sample: N										
Total Recoverable Calcium	DUP	1308692-01	ND	ND		mg/L			20		
	MS	1308692-01	ND	10.375	10.000	mg/L		104		75 - 125	
	MSD	1308692-01	ND	10.723	10.000	mg/L	3.3	107	20	75 - 125	
Total Recoverable Magnesium	DUP	1308692-01	ND	ND		mg/L			20		
	MS	1308692-01	ND	10.549	10.000	mg/L		105		75 - 125	
	MSD	1308692-01	ND	10.943	10.000	mg/L	3.7	109	20	75 - 125	
Total Recoverable Sodium	DUP	1308692-01	0.32509	0.31720		mg/L	2.5		20		J
	MS	1308692-01	0.32509	10.502	10.000	mg/L		102		75 - 125	
	MSD	1308692-01	0.32509	10.912	10.000	mg/L	3.8	106	20	75 - 125	
Total Recoverable Potassium	DUP	1308692-01	ND	0.27962		mg/L			20		J
	MS	1308692-01	ND	9.8395	10.000	mg/L		98.4		75 - 125	
	MSD	1308692-01	ND	10.139	10.000	mg/L	3.0	101	20	75 - 125	
QC Batch ID: BWE0048	Used client sample: Y - Description: MW-25-1, 04/24/2013 14:40										
Total Recoverable Calcium	DUP	1308396-12	97.436	100.05		mg/L	2.6		20		
	MS	1308396-12	97.436	106.93	10.000	mg/L		94.9		75 - 125	
	MSD	1308396-12	97.436	112.04	10.000	mg/L	4.7	146	20	75 - 125	A03
Total Recoverable Magnesium	DUP	1308396-12	32.000	32.891		mg/L	2.7		20		
	MS	1308396-12	32.000	41.847	10.000	mg/L		98.5		75 - 125	
	MSD	1308396-12	32.000	43.616	10.000	mg/L	4.1	116	20	75 - 125	
Total Recoverable Sodium	DUP	1308396-12	35.457	36.196		mg/L	2.1		20		
	MS	1308396-12	35.457	45.508	10.000	mg/L		101		75 - 125	
	MSD	1308396-12	35.457	47.158	10.000	mg/L	3.6	117	20	75 - 125	
Total Recoverable Potassium	DUP	1308396-12	2.9665	3.0427		mg/L	2.5		20		
	MS	1308396-12	2.9665	12.852	10.000	mg/L		98.9		75 - 125	
	MSD	1308396-12	2.9665	13.002	10.000	mg/L	1.2	100	20	75 - 125	
QC Batch ID: BWE0360	Used client sample: Y - Description: MW-18-3, 04/24/2013 10:20										
Perchlorate	DUP	308396-05RE2	34.076	34.606		ug/L	1.5		15		
	MS	308396-05RE2	34.076	87.260	50.505	ug/L		105		80 - 120	
	MSD	308396-05RE2	34.076	85.068	50.505	ug/L	2.5	101	15	80 - 120	
QC Batch ID: BWE0361	Used client sample: Y - Description: MW-25-1, 04/24/2013 14:40										

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0361	Used client sample: Y - Description: MW-25-1, 04/24/2013 14:40										
Perchlorate	DUP	1308396-12	9.2061	9.1254		ug/L	0.9		15		
	MS	1308396-12	9.2061	18.801	10.101	ug/L		95.0		80 - 120	
	MSD	1308396-12	9.2061	19.747	10.101	ug/L	4.9	104	15	80 - 120	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2141						
Hexavalent Chromium	BWD2141-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWD2142						
Hexavalent Chromium	BWD2142-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWE0047						
Total Recoverable Iron	BWE0047-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWE0048						
Total Recoverable Iron	BWE0048-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWE0145						
Total Recoverable Arsenic	BWE0145-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE0145-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWE0145-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BWE0409						
Total Recoverable Arsenic	BWE0409-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE0409-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWE0409-BLK1	ND	ug/L	1.0	0.10	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2141										
Hexavalent Chromium	BWD2141-BS1	LCS	0.050405	0.050000	mg/L	101		85 - 115		
QC Batch ID: BWD2142										
Hexavalent Chromium	BWD2142-BS1	LCS	0.048406	0.050000	mg/L	96.8		85 - 115		
QC Batch ID: BWE0047										
Total Recoverable Iron	BWE0047-BS1	LCS	1063.9	1000.0	ug/L	106		85 - 115		
QC Batch ID: BWE0048										
Total Recoverable Iron	BWE0048-BS1	LCS	1091.5	1000.0	ug/L	109		85 - 115		
QC Batch ID: BWE0145										
Total Recoverable Arsenic	BWE0145-BS1	LCS	100.77	100.00	ug/L	101		85 - 115		
Total Recoverable Chromium	BWE0145-BS1	LCS	39.824	40.000	ug/L	99.6		85 - 115		
Total Recoverable Lead	BWE0145-BS1	LCS	97.865	100.00	ug/L	97.9		85 - 115		
QC Batch ID: BWE0409										
Total Recoverable Arsenic	BWE0409-BS1	LCS	100.51	100.00	ug/L	101		85 - 115		
Total Recoverable Chromium	BWE0409-BS1	LCS	41.264	40.000	ug/L	103		85 - 115		
Total Recoverable Lead	BWE0409-BS1	LCS	104.88	100.00	ug/L	105		85 - 115		

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2141	Used client sample: Y - Description: EB-3-42413, 04/24/2013 07:00										
Hexavalent Chromium	DUP	1308396-02	ND	ND		mg/L			10		
	MS	1308396-02	ND	0.052263	0.052632	mg/L		99.3		85 - 115	
	MSD	1308396-02	ND	0.051904	0.052632	mg/L	0.7	98.6	10	85 - 115	
QC Batch ID: BWD2142	Used client sample: Y - Description: MW-25-1, 04/24/2013 14:40										
Hexavalent Chromium	DUP	1308396-12	ND	ND		mg/L			10		
	MS	1308396-12	ND	0.045471	0.052632	mg/L		86.4		85 - 115	
	MSD	1308396-12	ND	0.044627	0.052632	mg/L	1.9	84.8	10	85 - 115	Q03
QC Batch ID: BWE0047	Used client sample: N										
Total Recoverable Iron	DUP	1308692-01	ND	ND		ug/L			20		
	MS	1308692-01	ND	1046.5	1000.0	ug/L		105		75 - 125	
	MSD	1308692-01	ND	1094.6	1000.0	ug/L	4.5	109	20	75 - 125	
QC Batch ID: BWE0048	Used client sample: Y - Description: MW-25-1, 04/24/2013 14:40										
Total Recoverable Iron	DUP	1308396-12	564.39	641.89		ug/L	12.8		20		
	MS	1308396-12	564.39	1665.3	1000.0	ug/L		110		75 - 125	
	MSD	1308396-12	564.39	1751.7	1000.0	ug/L	5.1	119	20	75 - 125	
QC Batch ID: BWE0145	Used client sample: Y - Description: MW-25-1, 04/24/2013 14:40										
Total Recoverable Arsenic	DUP	1308396-12	ND	ND		ug/L			20		
	MS	1308396-12	ND	102.99	100.00	ug/L		103		70 - 130	
	MSD	1308396-12	ND	103.45	100.00	ug/L	0.4	103	20	70 - 130	
Total Recoverable Chromium	DUP	1308396-12	1.5830	1.5840		ug/L	0.1		20		J
	MS	1308396-12	1.5830	36.611	40.000	ug/L		87.6		70 - 130	
	MSD	1308396-12	1.5830	36.796	40.000	ug/L	0.5	88.0	20	70 - 130	
Total Recoverable Lead	DUP	1308396-12	ND	ND		ug/L			20		
	MS	1308396-12	ND	94.481	100.00	ug/L		94.5		70 - 130	
	MSD	1308396-12	ND	95.612	100.00	ug/L	1.2	95.6	20	70 - 130	
QC Batch ID: BWE0409	Used client sample: N										
Total Recoverable Arsenic	DUP	1309094-01	9.9980	10.113		ug/L	1.1		20		
	MS	1309094-01	9.9980	116.07	100.00	ug/L		106		70 - 130	
	MSD	1309094-01	9.9980	119.08	100.00	ug/L	2.6	109	20	70 - 130	
Total Recoverable Chromium	DUP	1309094-01	ND	ND		ug/L			20		
	MS	1309094-01	ND	39.904	40.000	ug/L		99.8		70 - 130	
	MSD	1309094-01	ND	41.098	40.000	ug/L	2.9	103	20	70 - 130	
Total Recoverable Lead	DUP	1309094-01	0.29400	0.30300		ug/L	3.0		20		J
	MS	1309094-01	0.29400	99.029	100.00	ug/L		98.7		70 - 130	
	MSD	1309094-01	0.29400	100.80	100.00	ug/L	1.8	101	20	70 - 130	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 10:33
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A03	The sample concentration is more than 4 times the spike level.
A10	PQL's and MDL's were raised due to matrix interference.
Q03	Matrix spike recovery(s) is(are) not within the control limits.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/15/2013

David Conner

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Project:	JPL- GW Monitoring Wells
BC Work Order:	1308499
Invoice ID:	B146188

Enclosed are the results of analyses for samples received by the laboratory on 4/25/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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Chain of Custody and Cooler Receipt Form for 1308499 Page 1 of 4

BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

p 1 of 2

Report & Bill to:

Name:	Battelle MHTS
Address:	505 King Ave.
City:	Columbus
State: OH	ZIP: 43201
Attn:	David Conner
Phone: (614) 458-5489	
Project: 2Q13 JPL	
Project #:	
Samplers Name: Andy Wolff	
1308499	

Analysis Requested

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
	TB-4-4/25/13-1	4-25-13	0600	AQ	X														X	
	EB-4-4/25/13-2		0630		X	X	X	X	X	X	X	X	X	X	X	X			X	Level III
	MW-22-5 -3		0710		X	X	X	X	X	X	X	X	X	X	X	X			X	
	MW-22-4 -4		0745		X	X	X	X	X	X	X	X	X	X	X	X			X	
	MW-22-3 -5		0810		X	X	X	X	X	X	X	X	X	X	X	X			X	
	MW-22-2 -6		0900		X	X	X	X	X	X	X	X	X	X	X	X			X	
	MW-22-1 -7		0935		X	X	X	X	X	X	X	X	X	X	X	X			X	Level III
	MW-4-5 -8		1045		X	X	X	X	X	X	X	X	X	X	X	X			X	
	MW-4-4 -9		1120		X	X	X	X	X	X	X	X	X	X	X	X			X	
	MW-4-3 -10		1150		X	X	X	X	X	X	X	X	X	X	X	X			X	
	MW-4-2 -11		1220		X	X	X	X	X	X	X	X	X	X	X	X			X	
	MW-4-1 -12	↓	1420	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	

Relinquished by: (Signature) Date & Time
Received By: Date & Time

Relinquished by: (Signature) Date & Time
Received by: Date & Time

Relinquished by: (Signature) Date & Time
Received By: Date & Time

Chain of Custody and Cooler Receipt Form for 1308499 Page 2 of 4

Chain of Custody

P 2 of 2

BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Report & Bill to:

Name: Battelle MHTS — Phone: (614) 458-5489
Address: 505 King Ave. — Project: 2Q13 JPL
City: Columbus — Project #:
State: OH — ZIP: 43201 — Samplers Name: Andy Wolff
Attn: David Conner — 1308499

Analysis Requested

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
	DUP-3-2Q13_13	4-25-13	0815	AQ	X	X	X	X	X	X	X	X	X	X	X	X			X	

Relinquished by: (Signature) — Received By: — Date & Time
Andy Wolff — Nicole — 4/25/13 1630

Relinquished by: (Signature) — Received by: — Date & Time
Nicole — [illegible] — 4-25-13 1630

Relinquished by: (Signature) — Received By: — Date & Time
[illegible] — M. Oman — 4/25/13 1940

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 08/17/12 Page 1 Of 2

Submission #: 1308499

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

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

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

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: Pt. PE Thermometer ID: 207 Date/Time: 4/25/13 2120

Temperature: (A) 2.4 °C / (C) 2.3 °C Analyst Init: MA

SAMPLE CONTAINERS	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL		B	B	B	B	B	B	B	B	B
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		C	C	C	C	C	C	C	C	C
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A(1)									
40ml VOA VIAL		A 3	A 3	A 3	A 3	A 3	A 3	A 3	A 3	A 3
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										

CHK BY: MA | DISTRIBUTION: MA SUB-OUT ☐

SHORT HOLDING TIME: (pH) (NO_2) (NO_3) OP SS DO Cl_2 BOD MBAS COT

Comments:____
Sample Numbering Completed By: MA Date/Time: 4/25/13 @ 2100

Chain of Custody and Cooler Receipt Form for 1308499 Page 4 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 08/17/12 Page 2 of 2

Submission #: 1308499

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____	Box ☐ Other ☐ (Specify)_____

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

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: Pt. pc Thermometer ID: 207 Date/Time: 4/25/13 2120

Temperature: (A) 2.4 °C / (C) 2.3 °C Analyst Init: MA

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	11	12	13	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL	B	B	B							
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C	C	C							
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A3	A3	A3							
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150 8270		D,E								
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										

Comments: Sample Numbering Completed By: MA Date/Time: 4/25/13 @ 2120

A = Actual / C = Corrected

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1308499-01	**COC Number:**	---	**Receive Date:** 04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:** 04/25/2013 06:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	TB-4-42513	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): TB-4-42513
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308499-02	**COC Number:**	---	**Receive Date:** 04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:** 04/25/2013 06:30
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	EB-4-42513	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): EB-4-42513
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308499-03	**COC Number:**	---	**Receive Date:** 04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:** 04/25/2013 07:10
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-22-5	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-22-5
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308499-04	**COC Number:**	---	**Receive Date:**	04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/25/2013 07:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-4	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-22-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308499-05	**COC Number:**	---	**Receive Date:**	04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/25/2013 08:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-3	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-22-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308499-06	**COC Number:**	---	**Receive Date:**	04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/25/2013 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-2	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-22-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308499-07	**COC Number:**	---	**Receive Date:**	04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/25/2013 09:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-22-1	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-22-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308499-08	**COC Number:**	---	**Receive Date:**	04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/25/2013 10:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-5	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-4-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308499-09	**COC Number:**	---	**Receive Date:**	04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:**	04/25/2013 11:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-4-4	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-4-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1308499-10	**COC Number:**	---	**Receive Date:** 04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:** 04/25/2013 11:50
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-4-3	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-4-3
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308499-11	**COC Number:**	---	**Receive Date:** 04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:** 04/25/2013 12:20
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-4-2	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-4-2
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308499-12	**COC Number:**	---	**Receive Date:** 04/25/2013 19:40
	Project Number:	JPL-GW	**Sampling Date:** 04/25/2013 14:20
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-4-1	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-4-1
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

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Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1308499-13

COC Number: ---
Project Number: JPL-GW
Sampling Location: ---
Sampling Point: DUP-3-2Q13
Sampled By: Andy Wolff of BAT

Receive Date: 04/25/2013 19:40
Sampling Date: 04/25/2013 08:15
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Delivery Work Order:
Global ID: 0000000000
Location ID (FieldPoint): DUP-3-2Q13
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-01 | **Client Sample Name:** JPL-GW, TB-4-42513, 4/25/2013 6:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-01 | **Client Sample Name:** JPL-GW, TB-4-42513, 4/25/2013 6:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-01 | **Client Sample Name:** JPL-GW, TB-4-42513, 4/25/2013 6:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 00:14	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-01 | **Client Sample Name:** JPL-GW, TB-4-42513, 4/25/2013 6:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 00:14	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-02 | **Client Sample Name:** JPL-GW, EB-4-42513, 4/25/2013 6:30:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-02 | **Client Sample Name:** JPL-GW, EB-4-42513, 4/25/2013 6:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

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505 King Ave.
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Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-02 | **Client Sample Name:** JPL-GW, EB-4-42513, 4/25/2013 6:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 00:36	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-02 | **Client Sample Name:** JPL-GW, EB-4-42513, 4/25/2013 6:30:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 00:36	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-02 | **Client Sample Name:** JPL-GW, EB-4-42513, 4/25/2013 6:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	ND	mg/L	0.50	0.17	EPA-200.7	ND		1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.26**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.18	**J**	3
Nitrate as N	ND	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	ND	mg/L	1.0	0.13	EPA-300.0	ND		3
pH	**6.17**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/02/13	05/03/13 12:44	JRG	PE-OP2	1	BWE0143
2	SM-2320B	04/30/13	04/30/13 16:50	FRP	MET-1	1	BWD2384
3	EPA-300.0	04/26/13	04/26/13 09:20	LD1	IC2	1	BWD2064
4	EPA-150.1	04/30/13	04/30/13 16:50	FRP	MET-1	1	BWD2384
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	0.667	BWD2082
6	EPA-353.2	04/26/13	04/26/13 09:27	TDC	KONE-1	1	BWD2168
7	EPA-314.0	05/06/13	05/06/13 12:46	LD1	IC6	1	BWE0449

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-02 | **Client Sample Name:** JPL-GW, EB-4-42513, 4/25/2013 6:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**7.8**	**ug/L**	**50**	**6.5**	**EPA-200.7**	18	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 23:57	LS1	KONE-1	1	BWD2161
2	EPA-200.8	05/06/13	05/06/13 16:48	SRM	PE-EL1	1	BWE0409
3	EPA-200.7	05/02/13	05/03/13 12:44	JRG	PE-OP2	1	BWE0143

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/25/2013 7:10:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/25/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.55**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/25/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 00:59	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/25/2013 7:10:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 00:59	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/25/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**5.5**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**1.3**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**66**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**0.73**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND	**J**	1
Bicarbonate	**82**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**18**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**96**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**7.2**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.18		3
Nitrate as N	ND	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	**38**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**9.11**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**210**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/13	05/08/13 14:22	JRG	PE-OP2	1	BWE0600
2	SM-2320B	04/30/13	04/30/13 16:56	FRP	MET-1	1	BWD2384
3	EPA-300.0	04/26/13	04/26/13 07:59	LD1	IC2	1	BWD2064
4	EPA-150.1	04/30/13	04/30/13 16:56	FRP	MET-1	1	BWD2384
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	2	BWD2082
6	EPA-353.2	04/26/13	04/26/13 09:33	TDC	KONE-1	1	BWD2168
7	EPA-314.0	05/06/13	05/06/13 13:00	LD1	IC6	1	BWE0449

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-03 | **Client Sample Name:** JPL-GW, MW-22-5, 4/25/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**16**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 23:57	LS1	KONE-1	1	BWD2161
2	EPA-200.8	05/06/13	05/06/13 16:51	SRM	PE-EL1	1	BWE0409
3	EPA-200.7	05/08/13	05/08/13 14:22	JRG	PE-OP2	1	BWE0600

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/25/2013 7:45:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/25/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/25/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 01:22	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/25/2013 7:45:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 01:22	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/25/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**39**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**12**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**31**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**13**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.18		3
Nitrate as N	**3.6**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**14**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.07**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**240**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/02/13	05/03/13 13:08	JRG	PE-OP2	1	BWE0143
2	SM-2320B	04/30/13	04/30/13 17:03	FRP	MET-1	1	BWD2384
3	EPA-300.0	04/26/13	04/26/13 09:34	LD1	IC2	1	BWD2064
4	EPA-150.1	04/30/13	04/30/13 17:03	FRP	MET-1	1	BWD2384
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	2	BWD2082
6	EPA-353.2	04/26/13	04/26/13 09:33	TDC	KONE-1	1	BWD2168
7	EPA-314.0	05/06/13	05/06/13 13:13	LD1	IC6	1	BWE0449

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-04 | **Client Sample Name:** JPL-GW, MW-22-4, 4/25/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0014**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**0.98**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**14**	**ug/L**	**50**	**6.5**	**EPA-200.7**	18	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 23:58	LS1	KONE-1	1	BWD2161
2	EPA-200.8	05/06/13	05/06/13 16:55	SRM	PE-EL1	1	BWE0409
3	EPA-200.7	05/02/13	05/03/13 13:08	JRG	PE-OP2	1	BWE0143

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-05 | **Client Sample Name:** JPL-GW, MW-22-3, 4/25/2013 8:10:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-05 | **Client Sample Name:** JPL-GW, MW-22-3, 4/25/2013 8:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.11**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-05 | **Client Sample Name:** JPL-GW, MW-22-3, 4/25/2013 8:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 01:44	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-05 | **Client Sample Name:** JPL-GW, MW-22-3, 4/25/2013 8:10:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 01:44	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-05 | **Client Sample Name:** JPL-GW, MW-22-3, 4/25/2013 8:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**62**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**21**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**41**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**49**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.18		3
Nitrate as N	**9.6**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**52**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.15**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**400**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.3**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/02/13	05/03/13 13:11	JRG	PE-OP2	1	BWE0143
2	SM-2320B	04/30/13	04/30/13 17:27	FRP	MET-1	1	BWD2385
3	EPA-300.0	04/26/13	04/26/13 09:48	LD1	IC2	1	BWD2064
4	EPA-150.1	04/30/13	04/30/13 17:27	FRP	MET-1	1	BWD2385
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	2	BWD2082
6	EPA-353.2	04/26/13	04/26/13 09:33	TDC	KONE-1	1	BWD2168
7	EPA-314.0	05/06/13	05/06/13 13:26	LD1	IC6	1	BWE0449

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-05 | **Client Sample Name:** JPL-GW, MW-22-3, 4/25/2013 8:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0015**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**2.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**19**	**ug/L**	**50**	**6.5**	**EPA-200.7**	18	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 23:58	LS1	KONE-1	1	BWD2161
2	EPA-200.8	05/06/13	05/06/13 16:58	SRM	PE-EL1	1	BWE0409
3	EPA-200.7	05/02/13	05/03/13 13:11	JRG	PE-OP2	1	BWE0143

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-06 | **Client Sample Name:** JPL-GW, MW-22-2, 4/25/2013 9:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-06 | **Client Sample Name:** JPL-GW, MW-22-2, 4/25/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.15**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-06 | **Client Sample Name:** JPL-GW, MW-22-2, 4/25/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	95.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 02:07	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-06 | **Client Sample Name:** JPL-GW, MW-22-2, 4/25/2013 9:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 02:07	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-06 | **Client Sample Name:** JPL-GW, MW-22-2, 4/25/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**78**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**29**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**39**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**64**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.18		3
Nitrate as N	**7.9**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**67**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.06**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**470**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**1.7**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/02/13	05/03/13 13:13	JRG	PE-OP2	1	BWE0143
2	SM-2320B	04/30/13	04/30/13 17:41	FRP	MET-1	1	BWD2385
3	EPA-300.0	04/26/13	04/26/13 10:01	LD1	IC2	1	BWD2064
4	EPA-150.1	04/30/13	04/30/13 17:41	FRP	MET-1	1	BWD2385
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	3.333	BWD2082
6	EPA-353.2	04/26/13	04/26/13 09:32	TDC	KONE-1	1	BWD2168
7	EPA-314.0	05/06/13	05/06/13 13:39	LD1	IC6	1	BWE0449

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-06 | **Client Sample Name:** JPL-GW, MW-22-2, 4/25/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.00079**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**0.94**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.7**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**40**	**ug/L**	**50**	**6.5**	**EPA-200.7**	18	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/25/13 23:58	LS1	KONE-1	1	BWD2161
2	EPA-200.8	05/06/13	05/06/13 17:01	SRM	PE-EL1	1	BWE0409
3	EPA-200.7	05/02/13	05/03/13 13:13	JRG	PE-OP2	1	BWE0143

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-07 | **Client Sample Name:** JPL-GW, MW-22-1, 4/25/2013 9:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.34**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-07 | **Client Sample Name:** JPL-GW, MW-22-1, 4/25/2013 9:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.23**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.80**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-07 | **Client Sample Name:** JPL-GW, MW-22-1, 4/25/2013 9:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	93.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 02:29	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-07 | **Client Sample Name:** JPL-GW, MW-22-1, 4/25/2013 9:35:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 02:29	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-07 | **Client Sample Name:** JPL-GW, MW-22-1, 4/25/2013 9:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**150**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**54**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**38**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**300**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**250**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**120**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.18		3
Nitrate as N	**12**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**190**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**7.56**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**810**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.5**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/02/13	05/03/13 13:16	JRG	PE-OP2	1	BWE0143
2	SM-2320B	04/30/13	04/30/13 17:47	FRP	MET-1	2	BWD2385
3	EPA-300.0	04/26/13	04/26/13 10:15	LD1	IC2	1	BWD2064
4	EPA-150.1	04/30/13	04/30/13 17:47	FRP	MET-1	1	BWD2385
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	3.333	BWD2082
6	EPA-353.2	04/26/13	04/26/13 09:33	TDC	KONE-1	1	BWD2168
7	EPA-314.0	05/06/13	05/06/13 13:53	LD1	IC6	1	BWE0449

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-07 | **Client Sample Name:** JPL-GW, MW-22-1, 4/25/2013 9:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.60**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**540**	**ug/L**	**50**	**6.5**	**EPA-200.7**	18		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/26/13 00:35	LS1	KONE-1	1	BWD2161
2	EPA-200.8	05/07/13	05/07/13 17:29	SRM	PE-EL1	1	BWE0499
3	EPA-200.7	05/02/13	05/03/13 13:16	JRG	PE-OP2	1	BWE0143

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-08 | **Client Sample Name:** JPL-GW, MW-4-5, 4/25/2013 10:45:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-08 | **Client Sample Name:** JPL-GW, MW-4-5, 4/25/2013 10:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-08 | **Client Sample Name:** JPL-GW, MW-4-5, 4/25/2013 10:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 02:52	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-08 | **Client Sample Name:** JPL-GW, MW-4-5, 4/25/2013 10:45:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 02:52	MGC	MS-V5	1	BWD2198

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-08 | **Client Sample Name:** JPL-GW, MW-4-5, 4/25/2013 10:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**37**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**14**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**36**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**30**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.18		3
Nitrate as N	ND	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	**18**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.07**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**250**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/02/13	05/03/13 13:18	JRG	PE-OP2	1	BWE0143
2	SM-2320B	04/30/13	04/30/13 17:54	FRP	MET-1	1	BWD2385
3	EPA-300.0	04/26/13	04/26/13 10:28	LD1	IC2	1	BWD2064
4	EPA-150.1	04/30/13	04/30/13 17:54	FRP	MET-1	1	BWD2385
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	2	BWD2082
6	EPA-353.2	04/26/13	04/26/13 09:33	TDC	KONE-1	1	BWD2168
7	EPA-314.0	05/06/13	05/06/13 14:06	LD1	IC6	1	BWE0449

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-08 | **Client Sample Name:** JPL-GW, MW-4-5, 4/25/2013 10:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**670**	**ug/L**	**50**	**6.5**	**EPA-200.7**	18		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/26/13 00:03	LS1	KONE-1	1	BWD2161
2	EPA-200.8	05/07/13	05/07/13 18:41	SRM	PE-EL1	1	BWE0499
3	EPA-200.7	05/02/13	05/03/13 13:18	JRG	PE-OP2	1	BWE0143

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-09 | **Client Sample Name:** JPL-GW, MW-4-4, 4/25/2013 11:20:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-09 | **Client Sample Name:** JPL-GW, MW-4-4, 4/25/2013 11:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-09 | **Client Sample Name:** JPL-GW, MW-4-4, 4/25/2013 11:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 03:14	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-09 | **Client Sample Name:** JPL-GW, MW-4-4, 4/25/2013 11:20:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 03:14	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-09 | **Client Sample Name:** JPL-GW, MW-4-4, 4/25/2013 11:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**36**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**13**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**36**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**150**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**28**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.18		3
Nitrate as N	**1.2**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**18**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.05**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**250**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	**0.14**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/02/13	05/03/13 13:21	JRG	PE-OP2	1	BWE0143
2	SM-2320B	04/30/13	04/30/13 18:01	FRP	MET-1	1	BWD2385
3	EPA-300.0	04/26/13	04/26/13 10:42	LD1	IC2	1	BWD2064
4	EPA-150.1	04/30/13	04/30/13 18:01	FRP	MET-1	1	BWD2385
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	2	BWD2082
6	EPA-353.2	04/26/13	04/26/13 09:33	TDC	KONE-1	1	BWD2168
7	EPA-314.0	05/06/13	05/06/13 14:46	LD1	IC6	1	BWE0449

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-09 | **Client Sample Name:** JPL-GW, MW-4-4, 4/25/2013 11:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**0.77**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.90**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**800**	**ug/L**	**50**	**6.5**	**EPA-200.7**	18		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/26/13 00:03	LS1	KONE-1	1	BWD2161
2	EPA-200.8	05/07/13	05/07/13 18:44	SRM	PE-EL1	1	BWE0499
3	EPA-200.7	05/02/13	05/03/13 13:21	JRG	PE-OP2	1	BWE0143

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-10 | **Client Sample Name:** JPL-GW, MW-4-3, 4/25/2013 11:50:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-10 | **Client Sample Name:** JPL-GW, MW-4-3, 4/25/2013 11:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-10 | **Client Sample Name:** JPL-GW, MW-4-3, 4/25/2013 11:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 03:37	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-10 | **Client Sample Name:** JPL-GW, MW-4-3, 4/25/2013 11:50:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 03:37	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-10 | **Client Sample Name:** JPL-GW, MW-4-3, 4/25/2013 11:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**39**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**14**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**36**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**150**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**27**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.18		3
Nitrate as N	**4.0**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**19**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.10**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**280**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/02/13	05/03/13 13:23	JRG	PE-OP2	1	BWE0143
2	SM-2320B	04/30/13	04/30/13 18:07	FRP	MET-1	1	BWD2385
3	EPA-300.0	04/26/13	04/26/13 10:56	LD1	IC2	1	BWD2064
4	EPA-150.1	04/30/13	04/30/13 18:07	FRP	MET-1	1	BWD2385
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	2	BWD2082
6	EPA-353.2	04/26/13	04/26/13 09:04	TDC	KONE-1	1	BWD2167
7	EPA-314.0	05/06/13	05/06/13 14:59	LD1	IC6	1	BWE0449

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-10 | **Client Sample Name:** JPL-GW, MW-4-3, 4/25/2013 11:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**0.95**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**310**	**ug/L**	**50**	**6.5**	**EPA-200.7**	18		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/26/13	04/26/13 08:21	TDC	KONE-1	1	BWD2165
2	EPA-200.8	05/07/13	05/07/13 18:47	SRM	PE-EL1	1	BWE0499
3	EPA-200.7	05/02/13	05/03/13 13:23	JRG	PE-OP2	1	BWE0143

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-11 | **Client Sample Name:** JPL-GW, MW-4-2, 4/25/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**1.7**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**2.1**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	**1.0**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.13**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND	V11	1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-11 | **Client Sample Name:** JPL-GW, MW-4-2, 4/25/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.25**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.16**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-11 | **Client Sample Name:** JPL-GW, MW-4-2, 4/25/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 03:59	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-11 | **Client Sample Name:** JPL-GW, MW-4-2, 4/25/2013 12:20:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 03:59	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-11 | **Client Sample Name:** JPL-GW, MW-4-2, 4/25/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**95**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**34**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**33**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**260**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**80**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.18		3
Nitrate as N	**5.4**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**78**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**7.72**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**520**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**220**	**ug/L**	**80**	**16**	**EPA-314.0**	ND	**A01**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/02/13	05/03/13 13:26	JRG	PE-OP2	1	BWE0143
2	SM-2320B	04/30/13	04/30/13 18:15	FRP	MET-1	1	BWD2385
3	EPA-300.0	04/26/13	04/26/13 11:09	LD1	IC2	1	BWD2064
4	EPA-150.1	04/30/13	04/30/13 18:15	FRP	MET-1	1	BWD2385
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	3.333	BWD2082
6	EPA-353.2	04/26/13	04/26/13 09:08	TDC	KONE-1	1	BWD2167
7	EPA-314.0	05/06/13	05/06/13 18:59	LS1	IC6	20	BWE0450

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-11 | **Client Sample Name:** JPL-GW, MW-4-2, 4/25/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**3.5**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**1100**	**ug/L**	**50**	**6.5**	**EPA-200.7**	18		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/26/13	04/26/13 08:34	TDC	KONE-1	1	BWD2165
2	EPA-200.8	05/07/13	05/07/13 18:51	SRM	PE-EL1	1	BWE0499
3	EPA-200.7	05/02/13	05/03/13 13:26	JRG	PE-OP2	1	BWE0143

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-12 | **Client Sample Name:** JPL-GW, MW-4-1, 4/25/2013 2:20:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-12 | **Client Sample Name:** JPL-GW, MW-4-1, 4/25/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-12 | **Client Sample Name:** JPL-GW, MW-4-1, 4/25/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 04:22	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-12 | **Client Sample Name:** JPL-GW, MW-4-1, 4/25/2013 2:20:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 04:22	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

BCL Sample ID: 1308499-12 | **Client Sample Name:** JPL-GW, MW-4-1, 4/25/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,4-Dioxane	ND	ug/L	1.0	0.38	EPA-8270C	ND		1
Naphthalene-d8 (Surrogate)	102	%	75 - 132 (LCL - UCL)		EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	04/29/13	05/10/13 21:48	RDS	MS-B4	1	BWE0259

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-12 | **Client Sample Name:** JPL-GW, MW-4-1, 4/25/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**71**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**23**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**24**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**340**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**270**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**13**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.15		3
Nitrate as N	**0.85**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**25**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**7.57**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**360**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/13	05/08/13 14:36	JRG	PE-OP2	1	BWE0600
2	SM-2320B	04/30/13	04/30/13 18:22	FRP	MET-1	1	BWD2385
3	EPA-300.0	04/26/13	04/26/13 11:23	LD1	IC2	1	BWD2063
4	EPA-150.1	04/30/13	04/30/13 18:22	FRP	MET-1	1	BWD2385
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	2	BWD2083
6	EPA-353.2	04/26/13	04/26/13 09:08	TDC	KONE-1	1	BWD2167
7	EPA-314.0	05/06/13	05/06/13 15:26	LD1	IC6	1	BWE0450

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-12 | **Client Sample Name:** JPL-GW, MW-4-1, 4/25/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**170**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/26/13	04/26/13 08:34	TDC	KONE-1	1	BWD2166
2	EPA-200.8	05/07/13	05/07/13 18:54	SRM	PE-EL1	1	BWE0499
3	EPA-200.7	05/08/13	05/08/13 14:36	JRG	PE-OP2	1	BWE0600

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-13 | **Client Sample Name:** JPL-GW, DUP-3-2Q13, 4/25/2013 8:15:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-13 | **Client Sample Name:** JPL-GW, DUP-3-2Q13, 4/25/2013 8:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.13**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND	V11	1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308499-13 | **Client Sample Name:** JPL-GW, DUP-3-2Q13, 4/25/2013 8:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 04:45	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308499-13 | **Client Sample Name:** JPL-GW, DUP-3-2Q13, 4/25/2013 8:15:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/28/13	04/29/13 04:45	MGC	MS-V5	1	BWD2199

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308499-13 | **Client Sample Name:** JPL-GW, DUP-3-2Q13, 4/25/2013 8:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**61**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**20**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**40**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**49**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	0.15		3
Nitrate as N	**9.7**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**52**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.20**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**390**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.6**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/13	05/06/13 14:42	JRG	PE-OP2	1	BWE0405
2	SM-2320B	04/30/13	04/30/13 18:29	FRP	MET-1	1	BWD2385
3	EPA-300.0	04/26/13	04/26/13 12:04	LD1	IC2	1	BWD2063
4	EPA-150.1	04/30/13	04/30/13 18:29	FRP	MET-1	1	BWD2385
5	EPA-160.1	04/26/13	04/26/13 08:50	NW1	MANUAL	2	BWD2083
6	EPA-353.2	04/26/13	04/26/13 09:33	TDC	KONE-1	1	BWD2167
7	EPA-314.0	05/06/13	05/06/13 15:39	LD1	IC6	1	BWE0450

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505 King Ave.
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Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308499-13 | **Client Sample Name:** JPL-GW, DUP-3-2Q13, 4/25/2013 8:15:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/25/13	04/26/13 00:03	LS1	KONE-1	1	BWD2161
2	EPA-200.8	05/07/13	05/07/13 18:57	SRM	PE-EL1	1	BWE0499
3	EPA-200.7	05/06/13	05/06/13 14:42	JRG	PE-OP2	1	BWE0405

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Reported: 05/15/2013 14:13
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Project Number: 2Q13 JPL
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: BWD2198						
Benzene	BWD2198-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWD2198-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWD2198-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWD2198-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWD2198-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWD2198-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWD2198-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWD2198-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWD2198-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWD2198-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BWD2198-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWD2198-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWD2198-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWD2198-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWD2198-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWD2198-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWD2198-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWD2198-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWD2198-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWD2198-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWD2198-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWD2198-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWD2198-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: BWD2198						
trans-1,3-Dichloropropene	BWD2198-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWD2198-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWD2198-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWD2198-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWD2198-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWD2198-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWD2198-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWD2198-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWD2198-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWD2198-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWD2198-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWD2198-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWD2198-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWD2198-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWD2198-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWD2198-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWD2198-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWD2198-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWD2198-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWD2198-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWD2198-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWD2198-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWD2198-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWD2198-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWD2198-BLK1	ND	ug/L	4.0	0.97	

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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: BWD2198						
Ethyl t-butyl ether	BWD2198-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWD2198-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWD2198-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWD2198-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWD2198-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWD2198-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWD2198-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWD2198-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWD2198-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWD2198-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWD2198-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWD2198-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWD2198-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWD2198-BLK1	103	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWD2198-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWD2198-BLK1	92.1	%	80 - 120 (LCL - UCL)		
QC Batch ID: BWD2199						
Benzene	BWD2199-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWD2199-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWD2199-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWD2199-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWD2199-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWD2199-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWD2199-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWD2199-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWD2199-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWD2199-BLK1	ND	ug/L	0.50	0.15	

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Project: JPL- GW Monitoring Wells
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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: BWD2199						
Dibromochloromethane	BWD2199-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWD2199-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWD2199-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWD2199-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWD2199-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWD2199-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWD2199-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWD2199-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWD2199-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWD2199-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWD2199-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWD2199-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWD2199-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	BWD2199-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWD2199-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWD2199-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWD2199-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWD2199-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWD2199-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWD2199-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWD2199-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWD2199-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWD2199-BLK1	ND	ug/L	0.50	0.19	

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Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2199						
1,1,1-Trichloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWD2199-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWD2199-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWD2199-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWD2199-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWD2199-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWD2199-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWD2199-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWD2199-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWD2199-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWD2199-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWD2199-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWD2199-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWD2199-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWD2199-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWD2199-BLK1	ND	ug/L	4.0	0.97	
Ethyl t-butyl ether	BWD2199-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWD2199-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWD2199-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWD2199-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWD2199-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWD2199-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWD2199-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWD2199-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWD2199-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWD2199-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWD2199-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWD2199-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWD2199-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWD2199-BLK1	109	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWD2199-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWD2199-BLK1	90.2	%	80 - 120 (LCL - UCL)		

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Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2198										
Benzene	BWD2198-BS1	LCS	26.490	25.000	ug/L	106		70 - 130		
Bromodichloromethane	BWD2198-BS1	LCS	26.730	25.000	ug/L	107		70 - 130		
Chlorobenzene	BWD2198-BS1	LCS	25.440	25.000	ug/L	102		70 - 130		
Chloroethane	BWD2198-BS1	LCS	27.390	25.000	ug/L	110		70 - 130		
1,4-Dichlorobenzene	BWD2198-BS1	LCS	27.430	25.000	ug/L	110		70 - 130		
1,1-Dichloroethane	BWD2198-BS1	LCS	25.450	25.000	ug/L	102		70 - 130		
1,1-Dichloroethene	BWD2198-BS1	LCS	26.040	25.000	ug/L	104		70 - 130		
Toluene	BWD2198-BS1	LCS	25.910	25.000	ug/L	104		70 - 130		
Trichloroethene	BWD2198-BS1	LCS	25.200	25.000	ug/L	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWD2198-BS1	LCS	10.510	10.000	ug/L	105		75 - 125		
Toluene-d8 (Surrogate)	BWD2198-BS1	LCS	10.090	10.000	ug/L	101		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWD2198-BS1	LCS	10.200	10.000	ug/L	102		80 - 120		
QC Batch ID: BWD2199										
Benzene	BWD2199-BS1	LCS	26.810	25.000	ug/L	107		70 - 130		
Bromodichloromethane	BWD2199-BS1	LCS	27.650	25.000	ug/L	111		70 - 130		
Chlorobenzene	BWD2199-BS1	LCS	25.110	25.000	ug/L	100		70 - 130		
Chloroethane	BWD2199-BS1	LCS	26.800	25.000	ug/L	107		70 - 130		
1,4-Dichlorobenzene	BWD2199-BS1	LCS	26.890	25.000	ug/L	108		70 - 130		
1,1-Dichloroethane	BWD2199-BS1	LCS	25.440	25.000	ug/L	102		70 - 130		
1,1-Dichloroethene	BWD2199-BS1	LCS	25.400	25.000	ug/L	102		70 - 130		
Toluene	BWD2199-BS1	LCS	26.180	25.000	ug/L	105		70 - 130		
Trichloroethene	BWD2199-BS1	LCS	28.200	25.000	ug/L	113		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWD2199-BS1	LCS	10.760	10.000	ug/L	108		75 - 125		
Toluene-d8 (Surrogate)	BWD2199-BS1	LCS	10.340	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWD2199-BS1	LCS	10.150	10.000	ug/L	102		80 - 120		

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505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2198	Used client sample: Y - Description: MW-20-1, 04/22/2013 12:30										
Benzene	MS	1308175-08	ND	26.340	25.000	ug/L		105		70 - 130	
	MSD	1308175-08	ND	25.980	25.000	ug/L	1.4	104	20	70 - 130	
Bromodichloromethane	MS	1308175-08	0.19000	27.720	25.000	ug/L		110		70 - 130	
	MSD	1308175-08	0.19000	27.610	25.000	ug/L	0.4	110	20	70 - 130	
Chlorobenzene	MS	1308175-08	ND	25.720	25.000	ug/L		103		70 - 130	
	MSD	1308175-08	ND	25.220	25.000	ug/L	2.0	101	20	70 - 130	
Chloroethane	MS	1308175-08	ND	27.110	25.000	ug/L		108		70 - 130	
	MSD	1308175-08	ND	26.890	25.000	ug/L	0.8	108	20	70 - 130	
1,4-Dichlorobenzene	MS	1308175-08	ND	27.940	25.000	ug/L		112		70 - 130	
	MSD	1308175-08	ND	27.190	25.000	ug/L	2.7	109	20	70 - 130	
1,1-Dichloroethane	MS	1308175-08	ND	25.200	25.000	ug/L		101		70 - 130	
	MSD	1308175-08	ND	25.360	25.000	ug/L	0.6	101	20	70 - 130	
1,1-Dichloroethene	MS	1308175-08	ND	25.770	25.000	ug/L		103		70 - 130	
	MSD	1308175-08	ND	25.770	25.000	ug/L	0	103	20	70 - 130	
Toluene	MS	1308175-08	ND	26.170	25.000	ug/L		105		70 - 130	
	MSD	1308175-08	ND	25.630	25.000	ug/L	2.1	103	20	70 - 130	
Trichloroethene	MS	1308175-08	ND	24.810	25.000	ug/L		99.2		70 - 130	
	MSD	1308175-08	ND	24.900	25.000	ug/L	0.4	99.6	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1308175-08	ND	10.370	10.000	ug/L		104		75 - 125	
	MSD	1308175-08	ND	10.590	10.000	ug/L	2.1	106		75 - 125	
Toluene-d8 (Surrogate)	MS	1308175-08	ND	10.320	10.000	ug/L		103		80 - 120	
	MSD	1308175-08	ND	10.210	10.000	ug/L	1.1	102		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1308175-08	ND	10.360	10.000	ug/L		104		80 - 120	
	MSD	1308175-08	ND	10.240	10.000	ug/L	1.2	102		80 - 120	
QC Batch ID: BWD2199	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
Benzene	MS	1308285-08	ND	26.450	25.000	ug/L		106		70 - 130	
	MSD	1308285-08	ND	26.640	25.000	ug/L	0.7	107	20	70 - 130	
Bromodichloromethane	MS	1308285-08	ND	27.870	25.000	ug/L		111		70 - 130	
	MSD	1308285-08	ND	28.190	25.000	ug/L	1.1	113	20	70 - 130	
Chlorobenzene	MS	1308285-08	ND	24.950	25.000	ug/L		99.8		70 - 130	
	MSD	1308285-08	ND	25.470	25.000	ug/L	2.1	102	20	70 - 130	
Chloroethane	MS	1308285-08	ND	26.740	25.000	ug/L		107		70 - 130	
	MSD	1308285-08	ND	26.730	25.000	ug/L	0.0	107	20	70 - 130	
1,4-Dichlorobenzene	MS	1308285-08	ND	26.570	25.000	ug/L		106		70 - 130	
	MSD	1308285-08	ND	27.910	25.000	ug/L	4.9	112	20	70 - 130	
1,1-Dichloroethane	MS	1308285-08	0.23000	25.760	25.000	ug/L		102		70 - 130	
	MSD	1308285-08	0.23000	25.880	25.000	ug/L	0.5	103	20	70 - 130	

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Project: JPL- GW Monitoring Wells
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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: BWD2199	Used client sample: Y - Description: MW-14-3, 04/23/2013 12:30										
1,1-Dichloroethene	MS	1308285-08	ND	25.380	25.000	ug/L		102		70 - 130	
	MSD	1308285-08	ND	25.620	25.000	ug/L	0.9	102	20	70 - 130	
Toluene	MS	1308285-08	ND	25.750	25.000	ug/L		103		70 - 130	
	MSD	1308285-08	ND	26.130	25.000	ug/L	1.5	105	20	70 - 130	
Trichloroethene	MS	1308285-08	1.4900	26.270	25.000	ug/L		99.1		70 - 130	
	MSD	1308285-08	1.4900	26.310	25.000	ug/L	0.2	99.3	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1308285-08	ND	10.680	10.000	ug/L		107		75 - 125	
	MSD	1308285-08	ND	10.890	10.000	ug/L	1.9	109		75 - 125	
Toluene-d8 (Surrogate)	MS	1308285-08	ND	10.220	10.000	ug/L		102		80 - 120	
	MSD	1308285-08	ND	10.180	10.000	ug/L	0.4	102		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1308285-08	ND	10.100	10.000	ug/L		101		80 - 120	
	MSD	1308285-08	ND	10.420	10.000	ug/L	3.1	104		80 - 120	

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Project Number: 2Q13 JPL
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: BWD2198						
Chloroacetonitrile	BWD2198-BLK1	0	ug/L			
1-Chlorobutane	BWD2198-BLK1	0	ug/L			
1,1-Dichloropropanone	BWD2198-BLK1	0	ug/L			
Methyl acrylate	BWD2198-BLK1	0	ug/L			
Nitrobenzene	BWD2198-BLK1	0	ug/L			
2-Nitropropane	BWD2198-BLK1	0	ug/L			
QC Batch ID: BWD2199						
Chloroacetonitrile	BWD2199-BLK1	0	ug/L			
1-Chlorobutane	BWD2199-BLK1	0	ug/L			
1,1-Dichloropropanone	BWD2199-BLK1	0	ug/L			
Methyl acrylate	BWD2199-BLK1	0	ug/L			
Nitrobenzene	BWD2199-BLK1	0	ug/L			
2-Nitropropane	BWD2199-BLK1	0	ug/L			

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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0259						
1,4-Dioxane	BWE0259-BLK1	ND	ug/L	1.0	0.38	
Naphthalene-d8 (Surrogate)	BWE0259-BLK1	88.7	%	75 - 132 (LCL - UCL)		

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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BWE0259										
1,4-Dioxane	BWE0259-BS1	LCS	51.730	50.000	ug/L	103		70 - 130		
Naphthalene-d8 (Surrogate)	BWE0259-BS1	LCS	39.890	40.000	ug/L	99.7		75 - 132		

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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BWE0259	Used client sample: N										
1,4-Dioxane	MS	1305402-99	ND	51.216	50.000	ug/L		102		70 - 130	
	MSD	1305402-99	ND	51.850	50.000	ug/L	1.2	104	30	70 - 130	
Naphthalene-d8 (Surrogate)	MS	1305402-99	ND	38.829	40.000	ug/L		97.1		75 - 132	
	MSD	1305402-99	ND	39.660	40.000	ug/L	2.1	99.2		75 - 132	

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWD2063						
Chloride	BWD2063-BLK1	0.15100	mg/L	0.50	0.068	J
Nitrate as N	BWD2063-BLK1	ND	mg/L	0.10	0.021	
Sulfate	BWD2063-BLK1	ND	mg/L	1.0	0.13	
QC Batch ID: BWD2064						
Chloride	BWD2064-BLK1	0.17900	mg/L	0.50	0.068	J
Nitrate as N	BWD2064-BLK1	ND	mg/L	0.10	0.021	
Sulfate	BWD2064-BLK1	ND	mg/L	1.0	0.13	
QC Batch ID: BWD2082						
Total Dissolved Solids @ 180 C	BWD2082-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWD2083						
Total Dissolved Solids @ 180 C	BWD2083-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWD2167						
Nitrite as N	BWD2167-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWD2168						
Nitrite as N	BWD2168-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWD2384						
Bicarbonate	BWD2384-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWD2384-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWD2384-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWD2385						
Bicarbonate	BWD2385-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWD2385-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWD2385-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0143						
Total Recoverable Calcium	BWE0143-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0143-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0143-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0143-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWE0405						
Total Recoverable Calcium	BWE0405-BLK1	ND	mg/L	0.10	0.018	

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0405						
Total Recoverable Magnesium	BWE0405-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0405-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0405-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWE0449						
Perchlorate	BWE0449-BLK1	ND	ug/L	4.0	0.81	
QC Batch ID: BWE0450						
Perchlorate	BWE0450-BLK1	ND	ug/L	4.0	0.81	
QC Batch ID: BWE0600						
Total Recoverable Calcium	BWE0600-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0600-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0600-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0600-BLK1	ND	mg/L	1.0	0.10	

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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: BWD2063										
Chloride	BWD2063-BS1	LCS	51.802	50.000	mg/L	104		90 - 110		
Nitrate as N	BWD2063-BS1	LCS	5.1360	5.0000	mg/L	103		90 - 110		
Sulfate	BWD2063-BS1	LCS	103.08	100.00	mg/L	103		90 - 110		
QC Batch ID: BWD2064										
Chloride	BWD2064-BS1	LCS	52.226	50.000	mg/L	104		90 - 110		
Nitrate as N	BWD2064-BS1	LCS	5.1520	5.0000	mg/L	103		90 - 110		
Sulfate	BWD2064-BS1	LCS	104.11	100.00	mg/L	104		90 - 110		
QC Batch ID: BWD2082										
Total Dissolved Solids @ 180 C	BWD2082-BS1	LCS	565.00	586.00	mg/L	96.4		90 - 110		
QC Batch ID: BWD2083										
Total Dissolved Solids @ 180 C	BWD2083-BS1	LCS	550.00	586.00	mg/L	93.9		90 - 110		
QC Batch ID: BWD2167										
Nitrite as N	BWD2167-BS1	LCS	0.51729	0.50000	mg/L	103		90 - 110		
QC Batch ID: BWD2168										
Nitrite as N	BWD2168-BS1	LCS	0.49010	0.50000	mg/L	98.0		90 - 110		
QC Batch ID: BWD2384										
Total Alkalinity as CaCO3	BWD2384-BS3	LCS	102.84	100.00	mg/L	103		90 - 110		
pH	BWD2384-BS2	LCS	7.0600	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWD2385										
Total Alkalinity as CaCO3	BWD2385-BS3	LCS	99.190	100.00	mg/L	99.2		90 - 110		
pH	BWD2385-BS2	LCS	7.0600	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0143										
Total Recoverable Calcium	BWE0143-BS1	LCS	9.9379	10.000	mg/L	99.4		85 - 115		
Total Recoverable Magnesium	BWE0143-BS1	LCS	9.9290	10.000	mg/L	99.3		85 - 115		
Total Recoverable Sodium	BWE0143-BS1	LCS	9.7564	10.000	mg/L	97.6		85 - 115		
Total Recoverable Potassium	BWE0143-BS1	LCS	9.4827	10.000	mg/L	94.8		85 - 115		
QC Batch ID: BWE0405										
Total Recoverable Calcium	BWE0405-BS1	LCS	10.236	10.000	mg/L	102		85 - 115		
Total Recoverable Magnesium	BWE0405-BS1	LCS	10.430	10.000	mg/L	104		85 - 115		
Total Recoverable Sodium	BWE0405-BS1	LCS	9.7862	10.000	mg/L	97.9		85 - 115		
Total Recoverable Potassium	BWE0405-BS1	LCS	9.6480	10.000	mg/L	96.5		85 - 115		
QC Batch ID: BWE0449										

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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: BWE0449										
Perchlorate	BWE0449-BS1	LCS	9.1398	10.000	ug/L	91.4		85 - 115		
QC Batch ID: BWE0450										
Perchlorate	BWE0450-BS1	LCS	9.8988	10.000	ug/L	99.0		85 - 115		
QC Batch ID: BWE0600										
Total Recoverable Calcium	BWE0600-BS1	LCS	10.202	10.000	mg/L	102		85 - 115		
Total Recoverable Magnesium	BWE0600-BS1	LCS	10.261	10.000	mg/L	103		85 - 115		
Total Recoverable Sodium	BWE0600-BS1	LCS	9.9817	10.000	mg/L	99.8		85 - 115		
Total Recoverable Potassium	BWE0600-BS1	LCS	9.6979	10.000	mg/L	97.0		85 - 115		

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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: BWD2063	Used client sample: N										
Chloride	DUP	308485-03RE1	33.506	33.592		mg/L	0.3		10		
	MS	308485-03RE1	33.506	144.59	101.01	mg/L		110		80 - 120	
	MSD	308485-03RE1	33.506	144.55	101.01	mg/L	0.0	110	10	80 - 120	
Nitrate as N	DUP	308485-03RE1	ND	ND		mg/L			10		
	MS	308485-03RE1	ND	10.390	10.101	mg/L		103		80 - 120	
	MSD	308485-03RE1	ND	10.372	10.101	mg/L	0.2	103	10	80 - 120	
Sulfate	DUP	308485-03RE1	224.23	224.57		mg/L	0.2		10		
	MS	308485-03RE1	224.23	444.66	202.02	mg/L		109		80 - 120	
	MSD	308485-03RE1	224.23	444.55	202.02	mg/L	0.0	109	10	80 - 120	
QC Batch ID: BWD2064	Used client sample: Y - Description: MW-22-5, 04/25/2013 07:10										
Chloride	DUP	1308499-03	7.2120	7.1960		mg/L	0.2		10		
	MS	1308499-03	7.2120	60.911	50.505	mg/L		106		80 - 120	
	MSD	1308499-03	7.2120	60.916	50.505	mg/L	0.0	106	10	80 - 120	
Nitrate as N	DUP	1308499-03	ND	ND		mg/L			10		
	MS	1308499-03	ND	5.1475	5.0505	mg/L		102		80 - 120	
	MSD	1308499-03	ND	5.1616	5.0505	mg/L	0.3	102	10	80 - 120	
Sulfate	DUP	1308499-03	38.283	38.257		mg/L	0.1		10		
	MS	1308499-03	38.283	147.83	101.01	mg/L		108		80 - 120	
	MSD	1308499-03	38.283	147.95	101.01	mg/L	0.1	109	10	80 - 120	
QC Batch ID: BWD2082	Used client sample: Y - Description: MW-22-2, 04/25/2013 09:00										
Total Dissolved Solids @ 180 C	DUP	1308499-06	473.33	480.00		mg/L	1.4		10		
QC Batch ID: BWD2083	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1308505-02	1650.0	1600.0		mg/L	3.1		10		
QC Batch ID: BWD2167	Used client sample: Y - Description: MW-4-1, 04/25/2013 14:20										
Nitrite as N	DUP	1308499-12	ND	ND		mg/L			10		
	MS	1308499-12	ND	0.52829	0.52632	mg/L		100		90 - 110	
	MSD	1308499-12	ND	0.53212	0.52632	mg/L	0.7	101	10	90 - 110	
QC Batch ID: BWD2168	Used client sample: Y - Description: EB-4-42513, 04/25/2013 06:30										
Nitrite as N	DUP	1308499-02	ND	ND		mg/L			10		
	MS	1308499-02	ND	0.50698	0.52632	mg/L		96.3		90 - 110	
	MSD	1308499-02	ND	0.51312	0.52632	mg/L	1.2	97.5	10	90 - 110	
QC Batch ID: BWD2384	Used client sample: N										
Bicarbonate	DUP	1308444-04	1300.7	1307.3		mg/L	0.5		10		
Carbonate	DUP	1308444-04	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308444-04	1066.8	1072.2		mg/L	0.5		10		
pH	DUP	1308444-04	6.9700	6.9800		pH Units	0.1		20		

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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: BWD2385	Used client sample: Y - Description: MW-22-3, 04/25/2013 08:10										
Bicarbonate	DUP	1308499-05	198.85	199.40		mg/L	0.3		10		
Carbonate	DUP	1308499-05	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308499-05	163.09	163.54		mg/L	0.3		10		
pH	DUP	1308499-05	8.1500	8.1900		pH Units	0.5		20		
QC Batch ID: BWE0143	Used client sample: Y - Description: EB-4-42513, 04/25/2013 06:30										
Total Recoverable Calcium	DUP	1308499-02	ND	ND		mg/L			20		
	MS	1308499-02	ND	10.078	10.000	mg/L		101		75 - 125	
	MSD	1308499-02	ND	9.8850	10.000	mg/L	1.9	98.8	20	75 - 125	
Total Recoverable Magnesium	DUP	1308499-02	ND	ND		mg/L			20		
	MS	1308499-02	ND	10.140	10.000	mg/L		101		75 - 125	
	MSD	1308499-02	ND	9.9021	10.000	mg/L	2.4	99.0	20	75 - 125	
Total Recoverable Sodium	DUP	1308499-02	ND	ND		mg/L			20		
	MS	1308499-02	ND	9.8757	10.000	mg/L		98.8		75 - 125	
	MSD	1308499-02	ND	9.6669	10.000	mg/L	2.1	96.7	20	75 - 125	
Total Recoverable Potassium	DUP	1308499-02	ND	ND		mg/L			20		
	MS	1308499-02	ND	9.6185	10.000	mg/L		96.2		75 - 125	
	MSD	1308499-02	ND	9.4156	10.000	mg/L	2.1	94.2	20	75 - 125	
QC Batch ID: BWE0405	Used client sample: N										
Total Recoverable Calcium	DUP	1307489-01	33.197	32.683		mg/L	1.6		20		
	MS	1307489-01	33.197	43.148	10.000	mg/L		99.5		75 - 125	
	MSD	1307489-01	33.197	43.060	10.000	mg/L	0.2	98.6	20	75 - 125	
Total Recoverable Magnesium	DUP	1307489-01	102.47	100.88		mg/L	1.6		20		
	MS	1307489-01	102.47	112.12	10.000	mg/L		96.5		75 - 125	
	MSD	1307489-01	102.47	112.98	10.000	mg/L	0.8	105	20	75 - 125	
Total Recoverable Sodium	DUP	1307489-01	186.03	180.10		mg/L	3.2		20		
	MS	1307489-01	186.03	187.86	10.000	mg/L		18.3		75 - 125	A03
	MSD	1307489-01	186.03	194.44	10.000	mg/L	3.4	84.1	20	75 - 125	
Total Recoverable Potassium	DUP	1307489-01	11.592	11.377		mg/L	1.9		20		
	MS	1307489-01	11.592	21.898	10.000	mg/L		103		75 - 125	
	MSD	1307489-01	11.592	21.788	10.000	mg/L	0.5	102	20	75 - 125	
QC Batch ID: BWE0449	Used client sample: Y - Description: MW-22-3, 04/25/2013 08:10										
Perchlorate	DUP	1308499-05	2.2604	2.1293		ug/L	6.0		15		J
	MS	1308499-05	2.2604	11.965	10.101	ug/L		96.1		80 - 120	
	MSD	1308499-05	2.2604	12.011	10.101	ug/L	0.4	96.5	15	80 - 120	
QC Batch ID: BWE0450	Used client sample: Y - Description: DUP-3-2Q13, 04/25/2013 08:15										

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0450	Used client sample: Y - Description: DUP-3-2Q13, 04/25/2013 08:15										
Perchlorate	DUP	1308499-13	2.5588	2.3443		ug/L	8.7		15		J
	MS	1308499-13	2.5588	11.619	10.101	ug/L		89.7		80 - 120	
	MSD	1308499-13	2.5588	11.449	10.101	ug/L	1.5	88.0	15	80 - 120	
QC Batch ID: BWE0600	Used client sample: N										
Total Recoverable Calcium	DUP	1308813-01	22.958	23.158		mg/L	0.9		20		
	MS	1308813-01	22.958	32.269	10.000	mg/L		93.1		75 - 125	
	MSD	1308813-01	22.958	32.534	10.000	mg/L	0.8	95.8	20	75 - 125	
Total Recoverable Magnesium	DUP	1308813-01	2.5264	2.5772		mg/L	2.0		20		
	MS	1308813-01	2.5264	12.519	10.000	mg/L		99.9		75 - 125	
	MSD	1308813-01	2.5264	12.423	10.000	mg/L	0.8	99.0	20	75 - 125	
Total Recoverable Sodium	DUP	1308813-01	26.134	26.782		mg/L	2.4		20		
	MS	1308813-01	26.134	35.426	10.000	mg/L		92.9		75 - 125	
	MSD	1308813-01	26.134	35.685	10.000	mg/L	0.7	95.5	20	75 - 125	
Total Recoverable Potassium	DUP	1308813-01	1.6155	1.6235		mg/L	0.5		20		
	MS	1308813-01	1.6155	11.328	10.000	mg/L		97.1		75 - 125	
	MSD	1308813-01	1.6155	11.333	10.000	mg/L	0.0	97.2	20	75 - 125	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2161						
Hexavalent Chromium	BWD2161-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWD2165						
Hexavalent Chromium	BWD2165-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWD2166						
Hexavalent Chromium	BWD2166-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWE0143						
Total Recoverable Iron	BWE0143-BLK1	17.608	ug/L	50	6.5	J
QC Batch ID: BWE0405						
Total Recoverable Iron	BWE0405-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWE0409						
Total Recoverable Arsenic	BWE0409-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE0409-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWE0409-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BWE0499						
Total Recoverable Arsenic	BWE0499-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE0499-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWE0499-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BWE0600						
Total Recoverable Iron	BWE0600-BLK1	ND	ug/L	50	6.5	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2161										
Hexavalent Chromium	BWD2161-BS1	LCS	0.049258	0.050000	mg/L	98.5		85 - 115		
QC Batch ID: BWD2165										
Hexavalent Chromium	BWD2165-BS1	LCS	0.049823	0.050000	mg/L	99.6		85 - 115		
QC Batch ID: BWD2166										
Hexavalent Chromium	BWD2166-BS1	LCS	0.047907	0.050000	mg/L	95.8		85 - 115		
QC Batch ID: BWE0143										
Total Recoverable Iron	BWE0143-BS1	LCS	1041.8	1000.0	ug/L	104		85 - 115		
QC Batch ID: BWE0405										
Total Recoverable Iron	BWE0405-BS1	LCS	1047.3	1000.0	ug/L	105		85 - 115		
QC Batch ID: BWE0409										
Total Recoverable Arsenic	BWE0409-BS1	LCS	100.51	100.00	ug/L	101		85 - 115		
Total Recoverable Chromium	BWE0409-BS1	LCS	41.264	40.000	ug/L	103		85 - 115		
Total Recoverable Lead	BWE0409-BS1	LCS	104.88	100.00	ug/L	105		85 - 115		
QC Batch ID: BWE0499										
Total Recoverable Arsenic	BWE0499-BS1	LCS	100.98	100.00	ug/L	101		85 - 115		
Total Recoverable Chromium	BWE0499-BS1	LCS	40.353	40.000	ug/L	101		85 - 115		
Total Recoverable Lead	BWE0499-BS1	LCS	101.15	100.00	ug/L	101		85 - 115		
QC Batch ID: BWE0600										
Total Recoverable Iron	BWE0600-BS1	LCS	1037.0	1000.0	ug/L	104		85 - 115		

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2161	Used client sample: Y - Description: EB-4-42513, 04/25/2013 06:30										
Hexavalent Chromium	DUP	1308499-02	ND	ND		mg/L			10		
	MS	1308499-02	ND	0.054184	0.052632	mg/L		103		85 - 115	
	MSD	1308499-02	ND	0.053937	0.052632	mg/L	0.5	102	10	85 - 115	
QC Batch ID: BWD2165	Used client sample: N										
Hexavalent Chromium	DUP	1308503-05	ND	ND		mg/L			10		
	MS	1308503-05	ND	0.049881	0.052632	mg/L		94.8		85 - 115	
	MSD	1308503-05	ND	0.048704	0.052632	mg/L	2.4	92.5	10	85 - 115	
QC Batch ID: BWD2166	Used client sample: Y - Description: MW-4-1, 04/25/2013 14:20										
Hexavalent Chromium	DUP	1308499-12	ND	ND		mg/L			10		
	MS	1308499-12	ND	0.049174	0.052632	mg/L		93.4		85 - 115	
	MSD	1308499-12	ND	0.049758	0.052632	mg/L	1.2	94.5	10	85 - 115	
QC Batch ID: BWE0143	Used client sample: Y - Description: EB-4-42513, 04/25/2013 06:30										
Total Recoverable Iron	DUP	1308499-02	7.7800	7.3289		ug/L	6.0		20		J
	MS	1308499-02	7.7800	1063.6	1000.0	ug/L		106		75 - 125	
	MSD	1308499-02	7.7800	1041.5	1000.0	ug/L	2.1	103	20	75 - 125	
QC Batch ID: BWE0405	Used client sample: N										
Total Recoverable Iron	DUP	1307489-01	109.97	116.41		ug/L	5.7		20		
	MS	1307489-01	109.97	1181.3	1000.0	ug/L		107		75 - 125	
	MSD	1307489-01	109.97	1177.3	1000.0	ug/L	0.3	107	20	75 - 125	
QC Batch ID: BWE0409	Used client sample: N										
Total Recoverable Arsenic	DUP	1309094-01	9.9980	10.113		ug/L	1.1		20		
	MS	1309094-01	9.9980	116.07	100.00	ug/L		106		70 - 130	
	MSD	1309094-01	9.9980	119.08	100.00	ug/L	2.6	109	20	70 - 130	
Total Recoverable Chromium	DUP	1309094-01	ND	ND		ug/L			20		
	MS	1309094-01	ND	39.904	40.000	ug/L		99.8		70 - 130	
	MSD	1309094-01	ND	41.098	40.000	ug/L	2.9	103	20	70 - 130	
Total Recoverable Lead	DUP	1309094-01	0.29400	0.30300		ug/L	3.0		20		J
	MS	1309094-01	0.29400	99.029	100.00	ug/L		98.7		70 - 130	
	MSD	1309094-01	0.29400	100.80	100.00	ug/L	1.8	101	20	70 - 130	
QC Batch ID: BWE0499	Used client sample: Y - Description: MW-22-1, 04/25/2013 09:35										
Total Recoverable Arsenic	DUP	1308499-07	ND	ND		ug/L			20		
	MS	1308499-07	ND	108.71	100.00	ug/L		109		70 - 130	
	MSD	1308499-07	ND	103.09	100.00	ug/L	5.3	103	20	70 - 130	
Total Recoverable Chromium	DUP	1308499-07	0.59900	0.60900		ug/L	1.7		20		J
	MS	1308499-07	0.59900	36.703	40.000	ug/L		90.3		70 - 130	
	MSD	1308499-07	0.59900	35.463	40.000	ug/L	3.4	87.2	20	70 - 130	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0499	Used client sample: Y - Description: MW-22-1, 04/25/2013 09:35										
Total Recoverable Lead	DUP	1308499-07	ND	ND		ug/L			20		
	MS	1308499-07	ND	96.244	100.00	ug/L		96.2		70 - 130	
	MSD	1308499-07	ND	95.025	100.00	ug/L	1.3	95.0	20	70 - 130	
QC Batch ID: BWE0600	Used client sample: N										
Total Recoverable Iron	DUP	1308813-01	ND	ND		ug/L			20		
	MS	1308813-01	ND	1033.6	1000.0	ug/L		103		75 - 125	
	MSD	1308813-01	ND	1057.1	1000.0	ug/L	2.2	106	20	75 - 125	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:13
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A03	The sample concentration is more than 4 times the spike level.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/15/2013

David Conner

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Project:	JPL- GW Monitoring Wells
BC Work Order:	1308571
Invoice ID:	B146181

Enclosed are the results of analyses for samples received by the laboratory on 4/26/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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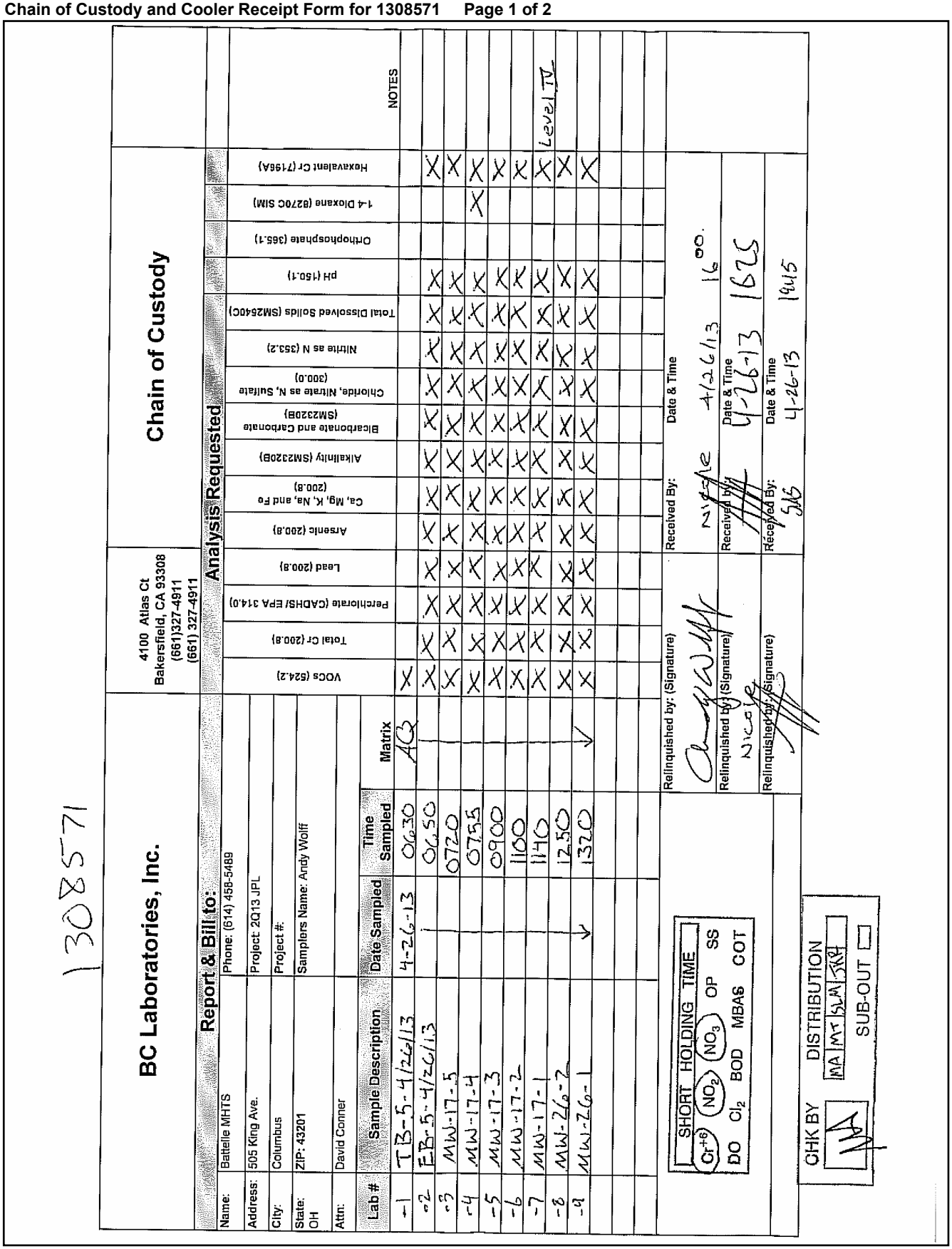

1308571

BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

Report & Bill to:

Name:	Battelle MHTS
Address:	505 King Ave.
City:	Columbus
State: OH	ZIP: 43201
Attn:	David Conner
Phone: (614) 458-5489	
Project: 2Q13 JPL	
Project #:	
Samplers Name: Andy Wolff	

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix
-1	TB-5-4/26/13	4-26-13	0630	AQ
-2	EB-5-4/26/13		0650	
-3	MW-17-5		0720	
-4	MW-17-4		0755	
-5	MW-17-3		0900	
-6	MW-17-2		1100	
-7	MW-17-1		1140	
-8	MW-26-2		1250	
-9	MW-26-1		1320	

Analysis Requested

Lab #	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
-1	X															
-2	X	X	X	X	X	X	X	X	X	X	X	X			X	
-3	X	X	X	X	X	X	X	X	X	X	X	X			X	
-4	X	X	X	X	X	X	X	X	X	X	X	X		X	X	
-5	X	X	X	X	X	X	X	X	X	X	X	X			X	
-6	X	X	X	X	X	X	X	X	X	X	X	X			X	
-7	X	X	X	X	X	X	X	X	X	X	X	X			X	Level IV
-8	X	X	X	X	X	X	X	X	X	X	X	X			X	
-9	X	X	X	X	X	X	X	X	X	X	X	X			X	

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

Relinquished by: (Signature) Received By: Date & Time
Andy Wolff Nicole 4/26/13 1600

Relinquished by: (Signature) Received by: Date & Time
Nicole 4-26-13 1825

Relinquished by: (Signature) Received By: Date & Time
SAS 4-26-13 1915

CHK BY

DISTRIBUTION
MA MT SLM SKH
SUB-OUT ☐

Chain of Custody and Cooler Receipt Form for 1308571 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 08/17/12 Page 1 Of 1

Submission #: 1308571

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

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

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

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

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

COC Received ☑YES ☐ NO

Emissivity: 0.95 Container: P+PE Thermometer ID: 207

Temperature: (A) 1.8 °C / (C) 1.7 °C

Date/Time 4/26/13 1445

Analyst Init SAS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL		B	B	B	B	B	B	B	B	
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		C	C	C	C	C	C	C	C	
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A									
40ml VOA VIAL	A	A 3	A 3	A 3	A 3	A 3	A 3	A 3	A 3	A 3
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER (080)				D						
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										

Comments:

Sample Numbering Completed By: SAS Date/Time: 4/26/13 2226

A = Actual / C = Corrected

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308571-01	**COC Number:**	---	**Receive Date:**	04/26/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	04/26/2013 06:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-5-42613	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-5-42613	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308571-02	**COC Number:**	---	**Receive Date:**	04/26/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	04/26/2013 06:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-5-42613	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-5-42613	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308571-03	**COC Number:**	---	**Receive Date:**	04/26/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	04/26/2013 07:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-5	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308571-04	**COC Number:**	---	**Receive Date:**	04/26/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	04/26/2013 07:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-4	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308571-05	**COC Number:**	---	**Receive Date:**	04/26/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	04/26/2013 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-3	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308571-06	**COC Number:**	---	**Receive Date:**	04/26/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	04/26/2013 11:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-2	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308571-07	**COC Number:**	---	**Receive Date:**	04/26/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	04/26/2013 11:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-17-1	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-17-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308571-08	**COC Number:**	---	**Receive Date:**	04/26/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	04/26/2013 12:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-26-2	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-26-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308571-09	**COC Number:**	---	**Receive Date:**	04/26/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	04/26/2013 13:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-26-1	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-26-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-01 | **Client Sample Name:** JPL-GW, TB-5-42613, 4/26/2013 6:30:00AM, Andy Wolff

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

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-01 | **Client Sample Name:** JPL-GW, TB-5-42613, 4/26/2013 6:30:00AM, Andy Wolff

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

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-01 | **Client Sample Name:** JPL-GW, TB-5-42613, 4/26/2013 6:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 00:52	MGC	MS-V5	1	BWD2312

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308571-01 | **Client Sample Name:** JPL-GW, TB-5-42613, 4/26/2013 6:30:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 00:52	MGC	MS-V5	1	BWD2312

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-02 | **Client Sample Name:** JPL-GW, EB-5-42613, 4/26/2013 6:50:00AM, Andy Wolff

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

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-02 | **Client Sample Name:** JPL-GW, EB-5-42613, 4/26/2013 6:50:00AM, Andy Wolff

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

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Project: JPL- GW Monitoring Wells
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Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-02 | **Client Sample Name:** JPL-GW, EB-5-42613, 4/26/2013 6:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	87.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 22:36	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308571-02 | **Client Sample Name:** JPL-GW, EB-5-42613, 4/26/2013 6:50:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/29/13 22:36	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308571-02 | **Client Sample Name:** JPL-GW, EB-5-42613, 4/26/2013 6:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	ND	mg/L	0.50	0.17	EPA-200.7	ND		1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	**5.0**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**4.1**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**0.33**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND	**J**	3
Nitrate as N	ND	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	**0.35**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**J**	3
pH	**6.10**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/13	05/06/13 15:42	JRG	PE-OP2	1	BWE0406
2	SM-2320B	05/02/13	05/02/13 12:03	FRP	MET-1	1	BWE0183
3	EPA-300.0	04/26/13	04/27/13 00:17	LD1	IC5	1	BWD2185
4	EPA-150.1	05/02/13	05/02/13 12:03	FRP	MET-1	1	BWE0183
5	EPA-160.1	04/29/13	04/29/13 09:25	NW1	MANUAL	0.667	BWD2212
6	EPA-353.2	04/26/13	04/26/13 22:34	TDC	KONE-1	1	BWD2274
7	EPA-314.0	05/07/13	05/07/13 12:47	LD1	IC6	1	BWE0631

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308571-02 | **Client Sample Name:** JPL-GW, EB-5-42613, 4/26/2013 6:50:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/26/13	04/26/13 21:59	LS1	KONE-1	1	BWD2283
2	EPA-200.8	05/07/13	05/07/13 19:13	SRM	PE-EL1	1	BWE0501
3	EPA-200.7	05/06/13	05/06/13 15:42	JRG	PE-OP2	1	BWE0406

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-03 | **Client Sample Name:** JPL-GW, MW-17-5, 4/26/2013 7:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.41**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-03 | **Client Sample Name:** JPL-GW, MW-17-5, 4/26/2013 7:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.61**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-03 | **Client Sample Name:** JPL-GW, MW-17-5, 4/26/2013 7:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 01:15	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308571-03 | **Client Sample Name:** JPL-GW, MW-17-5, 4/26/2013 7:20:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 01:15	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308571-03 | **Client Sample Name:** JPL-GW, MW-17-5, 4/26/2013 7:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	24	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	7.1	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	46	mg/L	0.50	0.17	EPA-200.7	ND		1
Total Recoverable Potassium	1.6	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	150	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	3.8	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	130	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	16	mg/L	0.50	0.068	EPA-300.0	ND		3
Nitrate as N	1.1	mg/L	0.10	0.021	EPA-300.0	ND		3
Sulfate	25	mg/L	1.0	0.13	EPA-300.0	ND		3
pH	8.38	pH Units	0.05	0.05	EPA-150.1		S05	4
Total Dissolved Solids @ 180 C	220	mg/L	20	20	EPA-160.1	ND		5
Nitrite as N	0.10	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	3.7	ug/L	4.0	0.81	EPA-314.0	ND	J	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/13	05/06/13 15:40	JRG	PE-OP2	1	BWE0406
2	SM-2320B	05/02/13	05/02/13 12:09	FRP	MET-1	1	BWE0183
3	EPA-300.0	04/26/13	04/27/13 00:30	LD1	IC5	1	BWD2185
4	EPA-150.1	05/02/13	05/02/13 12:09	FRP	MET-1	1	BWE0183
5	EPA-160.1	04/29/13	04/29/13 09:25	NW1	MANUAL	2	BWD2212
6	EPA-353.2	04/26/13	04/26/13 22:34	TDC	KONE-1	1	BWD2274
7	EPA-314.0	05/07/13	05/07/13 13:01	LD1	IC6	1	BWE0631

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308571-03 | **Client Sample Name:** JPL-GW, MW-17-5, 4/26/2013 7:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**6.6**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**240**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	**0.34**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/26/13	04/26/13 21:59	LS1	KONE-1	1	BWD2283
2	EPA-200.8	05/07/13	05/07/13 20:01	SRM	PE-EL1	1	BWE0501
3	EPA-200.7	05/06/13	05/06/13 15:40	JRG	PE-OP2	1	BWE0406

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Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-04 | **Client Sample Name:** JPL-GW, MW-17-4, 4/26/2013 7:55:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**0.26**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND	**J**	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.42**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-04 | **Client Sample Name:** JPL-GW, MW-17-4, 4/26/2013 7:55:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.14**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.86**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-04 | **Client Sample Name:** JPL-GW, MW-17-4, 4/26/2013 7:55:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 01:37	MGC	MS-V5	1	BWD2312

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308571-04 | **Client Sample Name:** JPL-GW, MW-17-4, 4/26/2013 7:55:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 01:37	MGC	MS-V5	1	BWD2312

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

BCL Sample ID: 1308571-04 | **Client Sample Name:** JPL-GW, MW-17-4, 4/26/2013 7:55:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,4-Dioxane	ND	ug/L	1.0	0.38	EPA-8270C	ND		1
Naphthalene-d8 (Surrogate)	98.5	%	75 - 132 (LCL - UCL)		EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	04/29/13	05/10/13 21:06	RDS	MS-B4	0.990	BWE0259

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308571-04 | **Client Sample Name:** JPL-GW, MW-17-4, 4/26/2013 7:55:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**40**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**12**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**47**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**23**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**3.2**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**31**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.11**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**250**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**8.2**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/13	05/06/13 15:45	JRG	PE-OP2	1	BWE0406
2	SM-2320B	05/02/13	05/02/13 12:14	FRP	MET-1	1	BWE0183
3	EPA-300.0	04/26/13	04/27/13 00:43	LD1	IC5	1	BWD2185
4	EPA-150.1	05/02/13	05/02/13 12:14	FRP	MET-1	1	BWE0183
5	EPA-160.1	04/29/13	04/29/13 09:25	NW1	MANUAL	2	BWD2212
6	EPA-353.2	04/26/13	04/26/13 22:34	TDC	KONE-1	1	BWD2274
7	EPA-314.0	05/07/13	05/07/13 13:14	LD1	IC6	1	BWE0631

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308571-04 | **Client Sample Name:** JPL-GW, MW-17-4, 4/26/2013 7:55:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**2.4**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**1.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**13**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/26/13	04/26/13 21:59	LS1	KONE-1	1	BWD2283
2	EPA-200.8	05/07/13	05/07/13 20:05	SRM	PE-EL1	1	BWE0501
3	EPA-200.7	05/06/13	05/06/13 15:45	JRG	PE-OP2	1	BWE0406

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-05 | **Client Sample Name:** JPL-GW, MW-17-3, 4/26/2013 9:00:00AM, Andy Wolff

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

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505 King Ave.
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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-05 | **Client Sample Name:** JPL-GW, MW-17-3, 4/26/2013 9:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-05 | **Client Sample Name:** JPL-GW, MW-17-3, 4/26/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 02:00	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308571-05 | **Client Sample Name:** JPL-GW, MW-17-3, 4/26/2013 9:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 02:00	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308571-05 | **Client Sample Name:** JPL-GW, MW-17-3, 4/26/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**49**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**27**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**27**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**150**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**39**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**7.1**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**44**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.14**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**350**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**6.3**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/13	05/06/13 15:47	JRG	PE-OP2	1	BWE0406
2	SM-2320B	05/02/13	05/02/13 12:20	FRP	MET-1	1	BWE0183
3	EPA-300.0	04/26/13	04/27/13 00:57	LD1	IC5	1	BWD2185
4	EPA-150.1	05/02/13	05/02/13 12:20	FRP	MET-1	1	BWE0183
5	EPA-160.1	04/29/13	04/29/13 09:25	NW1	MANUAL	2	BWD2212
6	EPA-353.2	04/26/13	04/26/13 22:34	TDC	KONE-1	1	BWD2274
7	EPA-314.0	05/07/13	05/07/13 13:27	LD1	IC6	1	BWE0631

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308571-05 | **Client Sample Name:** JPL-GW, MW-17-3, 4/26/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.0**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.61**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**78**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/26/13	04/26/13 21:59	LS1	KONE-1	1	BWD2283
2	EPA-200.8	05/07/13	05/07/13 20:08	SRM	PE-EL1	1	BWE0501
3	EPA-200.7	05/06/13	05/06/13 15:47	JRG	PE-OP2	1	BWE0406

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-06 | **Client Sample Name:** JPL-GW, MW-17-2, 4/26/2013 11:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-06 | **Client Sample Name:** JPL-GW, MW-17-2, 4/26/2013 11:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-06 | **Client Sample Name:** JPL-GW, MW-17-2, 4/26/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 02:22	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308571-06 | **Client Sample Name:** JPL-GW, MW-17-2, 4/26/2013 11:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 02:22	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308571-06 | **Client Sample Name:** JPL-GW, MW-17-2, 4/26/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**48**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**23**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**21**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**15**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**0.80**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**33**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.05**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**260**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.6**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/06/13	05/06/13 15:52	JRG	PE-OP2	1	BWE0406
2	SM-2320B	05/02/13	05/02/13 12:25	FRP	MET-1	1	BWE0183
3	EPA-300.0	04/26/13	04/27/13 01:37	LD1	IC5	1	BWD2185
4	EPA-150.1	05/02/13	05/02/13 12:25	FRP	MET-1	1	BWE0183
5	EPA-160.1	04/29/13	04/29/13 09:25	NW1	MANUAL	2	BWD2212
6	EPA-353.2	04/26/13	04/26/13 22:37	TDC	KONE-1	1	BWD2274
7	EPA-314.0	05/07/13	05/07/13 13:41	LD1	IC6	1	BWE0631

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308571-06 | **Client Sample Name:** JPL-GW, MW-17-2, 4/26/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.70**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**26**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/26/13	04/26/13 22:03	LS1	KONE-1	1	BWD2283
2	EPA-200.8	05/07/13	05/07/13 20:11	SRM	PE-EL1	1	BWE0501
3	EPA-200.7	05/06/13	05/06/13 15:52	JRG	PE-OP2	1	BWE0406

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-07 | **Client Sample Name:** JPL-GW, MW-17-1, 4/26/2013 11:40:00AM, Andy Wolff

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

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505 King Ave.
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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-07 | **Client Sample Name:** JPL-GW, MW-17-1, 4/26/2013 11:40:00AM, Andy Wolff

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

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-07 | **Client Sample Name:** JPL-GW, MW-17-1, 4/26/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 02:45	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308571-07 | **Client Sample Name:** JPL-GW, MW-17-1, 4/26/2013 11:40:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 02:45	MGC	MS-V5	1	BWD2312

Battelle MHTS
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Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308571-07 | **Client Sample Name:** JPL-GW, MW-17-1, 4/26/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**59**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**20**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**20**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**16**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**1.7**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**29**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**7.55**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**300**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/07/13	05/07/13 15:08	JRG	PE-OP2	1	BWE0492
2	SM-2320B	05/02/13	05/02/13 12:32	FRP	MET-1	1	BWE0183
3	EPA-300.0	04/26/13	04/26/13 23:23	LS1	IC5	1	BWD2185
4	EPA-150.1	05/02/13	05/02/13 12:32	FRP	MET-1	1	BWE0183
5	EPA-160.1	04/29/13	04/29/13 09:25	NW1	MANUAL	2	BWD2212
6	EPA-353.2	04/26/13	04/26/13 22:34	TDC	KONE-1	1	BWD2274
7	EPA-314.0	05/07/13	05/07/13 13:54	LD1	IC6	1	BWE0631

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505 King Ave.
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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308571-07 | **Client Sample Name:** JPL-GW, MW-17-1, 4/26/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**280**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/26/13	04/26/13 21:59	LS1	KONE-1	1	BWD2283
2	EPA-200.8	05/07/13	05/07/13 20:14	SRM	PE-EL1	1	BWE0501
3	EPA-200.7	05/07/13	05/07/13 15:08	JRG	PE-OP2	1	BWE0492

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505 King Ave.
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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-08 | **Client Sample Name:** JPL-GW, MW-26-2, 4/26/2013 12:50:00PM, Andy Wolff

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

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Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-08 | **Client Sample Name:** JPL-GW, MW-26-2, 4/26/2013 12:50:00PM, Andy Wolff

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

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505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-08 | **Client Sample Name:** JPL-GW, MW-26-2, 4/26/2013 12:50:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	88.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 03:07	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308571-08 | **Client Sample Name:** JPL-GW, MW-26-2, 4/26/2013 12:50:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 03:07	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308571-08 | **Client Sample Name:** JPL-GW, MW-26-2, 4/26/2013 12:50:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**57**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**25**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**51**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**280**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**230**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**52**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**0.35**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**37**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**8.05**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**390**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	**0.17**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/07/13	05/07/13 15:23	JRG	PE-OP2	1	BWE0492
2	SM-2320B	05/02/13	05/02/13 12:39	FRP	MET-1	1	BWE0183
3	EPA-300.0	04/26/13	04/27/13 01:50	LD1	IC5	1	BWD2185
4	EPA-150.1	05/02/13	05/02/13 12:39	FRP	MET-1	1	BWE0183
5	EPA-160.1	04/29/13	04/29/13 09:25	NW1	MANUAL	2	BWD2212
6	EPA-353.2	04/26/13	04/26/13 22:37	TDC	KONE-1	1	BWD2274
7	EPA-314.0	05/07/13	05/07/13 14:07	LD1	IC6	1	BWE0631

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308571-08 | **Client Sample Name:** JPL-GW, MW-26-2, 4/26/2013 12:50:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.2**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.9**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**1700**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/26/13	04/26/13 22:03	LS1	KONE-1	1	BWD2283
2	EPA-200.8	05/07/13	05/07/13 20:17	SRM	PE-EL1	1	BWE0501
3	EPA-200.7	05/07/13	05/07/13 15:23	JRG	PE-OP2	1	BWE0492

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-09 | **Client Sample Name:** JPL-GW, MW-26-1, 4/26/2013 1:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.27**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.10**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-09 | **Client Sample Name:** JPL-GW, MW-26-1, 4/26/2013 1:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.71**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.31**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308571-09 | **Client Sample Name:** JPL-GW, MW-26-1, 4/26/2013 1:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 03:30	MGC	MS-V5	1	BWD2312

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308571-09 | **Client Sample Name:** JPL-GW, MW-26-1, 4/26/2013 1:20:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/29/13	04/30/13 03:30	MGC	MS-V5	1	BWD2312

Battelle MHTS
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Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308571-09 | **Client Sample Name:** JPL-GW, MW-26-1, 4/26/2013 1:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**120**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**44**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**36**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**290**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**240**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**95**	**mg/L**	**0.50**	**0.068**	**EPA-300.0**	ND		3
Nitrate as N	**9.5**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		3
Sulfate	**120**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND		3
pH	**7.35**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**640**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	**0.10**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND		6
Perchlorate	**2.6**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/07/13	05/07/13 15:32	JRG	PE-OP2	1	BWE0492
2	SM-2320B	05/02/13	05/02/13 13:01	FRP	MET-1	2	BWE0184
3	EPA-300.0	04/26/13	04/27/13 02:04	LD1	IC5	1	BWD2185
4	EPA-150.1	05/02/13	05/02/13 13:01	FRP	MET-1	1	BWE0184
5	EPA-160.1	04/29/13	04/29/13 09:25	NW1	MANUAL	3.333	BWD2212
6	EPA-353.2	04/26/13	04/26/13 22:37	TDC	KONE-1	1	BWD2274
7	EPA-314.0	05/07/13	05/07/13 14:21	LD1	IC6	1	BWE0631

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308571-09 | **Client Sample Name:** JPL-GW, MW-26-1, 4/26/2013 1:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.93**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**6700**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	**0.13**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/26/13	04/26/13 22:03	LS1	KONE-1	1	BWD2283
2	EPA-200.8	05/07/13	05/07/13 20:20	SRM	PE-EL1	1	BWE0501
3	EPA-200.7	05/07/13	05/07/13 15:32	JRG	PE-OP2	1	BWE0492

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2312						
Benzene	BWD2312-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWD2312-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWD2312-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWD2312-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWD2312-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWD2312-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWD2312-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWD2312-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWD2312-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWD2312-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWD2312-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWD2312-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWD2312-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWD2312-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWD2312-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWD2312-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BWD2312-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWD2312-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWD2312-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWD2312-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWD2312-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWD2312-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWD2312-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWD2312-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWD2312-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWD2312-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWD2312-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWD2312-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWD2312-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWD2312-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWD2312-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWD2312-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWD2312-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWD2312-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: BWD2312						
trans-1,3-Dichloropropene	BWD2312-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWD2312-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWD2312-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWD2312-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWD2312-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWD2312-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWD2312-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWD2312-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWD2312-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWD2312-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWD2312-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWD2312-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWD2312-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWD2312-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWD2312-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWD2312-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BWD2312-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWD2312-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWD2312-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWD2312-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWD2312-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWD2312-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWD2312-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWD2312-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWD2312-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWD2312-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWD2312-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWD2312-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWD2312-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWD2312-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWD2312-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWD2312-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWD2312-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWD2312-BLK1	ND	ug/L	4.0	0.97	

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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: BWD2312						
Ethyl t-butyl ether	BWD2312-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWD2312-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWD2312-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWD2312-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWD2312-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWD2312-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWD2312-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWD2312-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWD2312-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWD2312-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWD2312-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWD2312-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWD2312-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWD2312-BLK1	110	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWD2312-BLK1	103	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWD2312-BLK1	89.0	%	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: BWD2312										
Benzene	BWD2312-BS1	LCS	28.060	25.000	ug/L	112		70 - 130		
Bromodichloromethane	BWD2312-BS1	LCS	28.530	25.000	ug/L	114		70 - 130		
Chlorobenzene	BWD2312-BS1	LCS	26.580	25.000	ug/L	106		70 - 130		
Chloroethane	BWD2312-BS1	LCS	28.830	25.000	ug/L	115		70 - 130		
1,4-Dichlorobenzene	BWD2312-BS1	LCS	29.210	25.000	ug/L	117		70 - 130		
1,1-Dichloroethane	BWD2312-BS1	LCS	26.800	25.000	ug/L	107		70 - 130		
1,1-Dichloroethene	BWD2312-BS1	LCS	27.130	25.000	ug/L	109		70 - 130		
Toluene	BWD2312-BS1	LCS	27.920	25.000	ug/L	112		70 - 130		
Trichloroethene	BWD2312-BS1	LCS	28.760	25.000	ug/L	115		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWD2312-BS1	LCS	10.610	10.000	ug/L	106		75 - 125		
Toluene-d8 (Surrogate)	BWD2312-BS1	LCS	10.460	10.000	ug/L	105		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWD2312-BS1	LCS	10.330	10.000	ug/L	103		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: BWD2312	Used client sample: Y - Description: EB-5-42613, 04/26/2013 06:50										
Benzene	MS	1308571-02	ND	26.890	25.000	ug/L		108		70 - 130	
	MSD	1308571-02	ND	27.290	25.000	ug/L	1.5	109	20	70 - 130	
Bromodichloromethane	MS	1308571-02	ND	27.660	25.000	ug/L		111		70 - 130	
	MSD	1308571-02	ND	27.940	25.000	ug/L	1.0	112	20	70 - 130	
Chlorobenzene	MS	1308571-02	ND	25.800	25.000	ug/L		103		70 - 130	
	MSD	1308571-02	ND	26.030	25.000	ug/L	0.9	104	20	70 - 130	
Chloroethane	MS	1308571-02	ND	27.800	25.000	ug/L		111		70 - 130	
	MSD	1308571-02	ND	28.120	25.000	ug/L	1.1	112	20	70 - 130	
1,4-Dichlorobenzene	MS	1308571-02	ND	28.270	25.000	ug/L		113		70 - 130	
	MSD	1308571-02	ND	28.010	25.000	ug/L	0.9	112	20	70 - 130	
1,1-Dichloroethane	MS	1308571-02	ND	25.640	25.000	ug/L		103		70 - 130	
	MSD	1308571-02	ND	26.400	25.000	ug/L	2.9	106	20	70 - 130	
1,1-Dichloroethene	MS	1308571-02	ND	25.800	25.000	ug/L		103		70 - 130	
	MSD	1308571-02	ND	26.240	25.000	ug/L	1.7	105	20	70 - 130	
Toluene	MS	1308571-02	ND	26.590	25.000	ug/L		106		70 - 130	
	MSD	1308571-02	ND	26.510	25.000	ug/L	0.3	106	20	70 - 130	
Trichloroethene	MS	1308571-02	ND	25.320	25.000	ug/L		101		70 - 130	
	MSD	1308571-02	ND	25.190	25.000	ug/L	0.5	101	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1308571-02	ND	10.340	10.000	ug/L		103		75 - 125	
	MSD	1308571-02	ND	10.710	10.000	ug/L	3.5	107		75 - 125	
Toluene-d8 (Surrogate)	MS	1308571-02	ND	10.250	10.000	ug/L		102		80 - 120	
	MSD	1308571-02	ND	10.100	10.000	ug/L	1.5	101		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1308571-02	ND	10.370	10.000	ug/L		104		80 - 120	
	MSD	1308571-02	ND	10.210	10.000	ug/L	1.6	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: BWD2312						
Chloroacetonitrile	BWD2312-BLK1	0	ug/L			
1-Chlorobutane	BWD2312-BLK1	0	ug/L			
1,1-Dichloropropanone	BWD2312-BLK1	0	ug/L			
Methyl acrylate	BWD2312-BLK1	0	ug/L			
Nitrobenzene	BWD2312-BLK1	0	ug/L			
2-Nitropropane	BWD2312-BLK1	0	ug/L			

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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0259						
1,4-Dioxane	BWE0259-BLK1	ND	ug/L	1.0	0.38	
Naphthalene-d8 (Surrogate)	BWE0259-BLK1	88.7	%	75 - 132 (LCL - UCL)		

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Project: JPL- GW Monitoring Wells
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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BWE0259										
1,4-Dioxane	BWE0259-BS1	LCS	51.730	50.000	ug/L	103		70 - 130		
Naphthalene-d8 (Surrogate)	BWE0259-BS1	LCS	39.890	40.000	ug/L	99.7		75 - 132		

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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BWE0259	Used client sample: N										
1,4-Dioxane	MS	1305402-99	ND	51.216	50.000	ug/L		102		70 - 130	
	MSD	1305402-99	ND	51.850	50.000	ug/L	1.2	104	30	70 - 130	
Naphthalene-d8 (Surrogate)	MS	1305402-99	ND	38.829	40.000	ug/L		97.1		75 - 132	
	MSD	1305402-99	ND	39.660	40.000	ug/L	2.1	99.2		75 - 132	

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWD2185						
Chloride	BWD2185-BLK1	ND	mg/L	0.50	0.068	
Nitrate as N	BWD2185-BLK1	ND	mg/L	0.10	0.021	
Sulfate	BWD2185-BLK1	ND	mg/L	1.0	0.13	
QC Batch ID: BWD2212						
Total Dissolved Solids @ 180 C	BWD2212-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWD2274						
Nitrite as N	BWD2274-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWE0183						
Bicarbonate	BWE0183-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0183-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0183-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0184						
Bicarbonate	BWE0184-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0184-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0184-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0406						
Total Recoverable Calcium	BWE0406-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0406-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0406-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0406-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWE0492						
Total Recoverable Calcium	BWE0492-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0492-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0492-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0492-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWE0631						
Perchlorate	BWE0631-BLK1	ND	ug/L	4.0	0.81	

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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: BWD2185										
Chloride	BWD2185-BS1	LCS	50.337	50.000	mg/L	101		90 - 110		
Nitrate as N	BWD2185-BS1	LCS	5.0300	5.0000	mg/L	101		90 - 110		
Sulfate	BWD2185-BS1	LCS	100.19	100.00	mg/L	100		90 - 110		
QC Batch ID: BWD2212										
Total Dissolved Solids @ 180 C	BWD2212-BS1	LCS	565.00	586.00	mg/L	96.4		90 - 110		
QC Batch ID: BWD2274										
Nitrite as N	BWD2274-BS1	LCS	0.53842	0.50000	mg/L	108		90 - 110		
QC Batch ID: BWE0183										
Total Alkalinity as CaCO3	BWE0183-BS3	LCS	98.730	100.00	mg/L	98.7		90 - 110		
pH	BWE0183-BS2	LCS	7.0500	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0184										
Total Alkalinity as CaCO3	BWE0184-BS3	LCS	101.02	100.00	mg/L	101		90 - 110		
pH	BWE0184-BS2	LCS	7.0500	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0406										
Total Recoverable Calcium	BWE0406-BS1	LCS	10.318	10.000	mg/L	103		85 - 115		
Total Recoverable Magnesium	BWE0406-BS1	LCS	10.486	10.000	mg/L	105		85 - 115		
Total Recoverable Sodium	BWE0406-BS1	LCS	10.167	10.000	mg/L	102		85 - 115		
Total Recoverable Potassium	BWE0406-BS1	LCS	9.8369	10.000	mg/L	98.4		85 - 115		
QC Batch ID: BWE0492										
Total Recoverable Calcium	BWE0492-BS1	LCS	10.749	10.000	mg/L	107		85 - 115		
Total Recoverable Magnesium	BWE0492-BS1	LCS	10.779	10.000	mg/L	108		85 - 115		
Total Recoverable Sodium	BWE0492-BS1	LCS	10.378	10.000	mg/L	104		85 - 115		
Total Recoverable Potassium	BWE0492-BS1	LCS	10.236	10.000	mg/L	102		85 - 115		
QC Batch ID: BWE0631										
Perchlorate	BWE0631-BS1	LCS	10.471	10.000	ug/L	105		85 - 115		

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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: BWD2185	Used client sample: Y - Description: MW-17-1, 04/26/2013 11:40										
Chloride	DUP	1308571-07	15.765	15.653		mg/L	0.7		10		
	MS	1308571-07	15.765	68.924	50.505	mg/L		105		80 - 120	
	MSD	1308571-07	15.765	68.844	50.505	mg/L	0.1	105	10	80 - 120	
Nitrate as N	DUP	1308571-07	1.6890	1.6780		mg/L	0.7		10		
	MS	1308571-07	1.6890	6.7182	5.0505	mg/L		99.6		80 - 120	
	MSD	1308571-07	1.6890	6.7495	5.0505	mg/L	0.5	100	10	80 - 120	
Sulfate	DUP	1308571-07	29.332	29.215		mg/L	0.4		10		
	MS	1308571-07	29.332	133.14	101.01	mg/L		103		80 - 120	
	MSD	1308571-07	29.332	132.99	101.01	mg/L	0.1	103	10	80 - 120	
QC Batch ID: BWD2212	Used client sample: Y - Description: MW-26-1, 04/26/2013 13:20										
Total Dissolved Solids @ 180 C	DUP	1308571-09	643.33	636.66		mg/L	1.0		10		
QC Batch ID: BWD2274	Used client sample: Y - Description: MW-17-1, 04/26/2013 11:40										
Nitrite as N	DUP	1308571-07	ND	ND		mg/L			10		
	MS	1308571-07	ND	0.55183	0.52632	mg/L		105		90 - 110	
	MSD	1308571-07	ND	0.55178	0.52632	mg/L	0.0	105	10	90 - 110	
QC Batch ID: BWE0183	Used client sample: N										
Bicarbonate	DUP	1308905-01	266.55	263.58		mg/L	1.1		10		
Carbonate	DUP	1308905-01	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308905-01	218.61	216.18		mg/L	1.1		10		
pH	DUP	1308905-01	7.2300	7.2400		pH Units	0.1		20		
QC Batch ID: BWE0184	Used client sample: Y - Description: MW-26-1, 04/26/2013 13:20										
Bicarbonate	DUP	1308571-09	293.08	301.98		mg/L	3.0		10		
Carbonate	DUP	1308571-09	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308571-09	240.37	247.67		mg/L	3.0		10		
pH	DUP	1308571-09	7.3500	7.3300		pH Units	0.3		20		
QC Batch ID: BWE0406	Used client sample: N										
Total Recoverable Calcium	DUP	1308873-01	29.984	30.474		mg/L	1.6		20		
	MS	1308873-01	29.984	40.109	10.000	mg/L		101		75 - 125	
	MSD	1308873-01	29.984	40.002	10.000	mg/L	0.3	100	20	75 - 125	
Total Recoverable Magnesium	DUP	1308873-01	1.1740	1.1851		mg/L	0.9		20		
	MS	1308873-01	1.1740	11.404	10.000	mg/L		102		75 - 125	
	MSD	1308873-01	1.1740	11.389	10.000	mg/L	0.1	102	20	75 - 125	
Total Recoverable Sodium	DUP	1308873-01	356.54	367.00		mg/L	2.9		20		
	MS	1308873-01	356.54	375.55	10.000	mg/L		190		75 - 125	A03
	MSD	1308873-01	356.54	363.91	10.000	mg/L	3.1	73.7	20	75 - 125	A03

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0406	Used client sample: N										
Total Recoverable Potassium	DUP	1308873-01	1159.0	1180.2		mg/L	1.8		20		
	MS	1308873-01	1159.0	1183.9	10.000	mg/L		249		75 - 125	A03
	MSD	1308873-01	1159.0	1159.6	10.000	mg/L	2.1	6.3	20	75 - 125	A03
QC Batch ID: BWE0492	Used client sample: Y - Description: MW-17-1, 04/26/2013 11:40										
Total Recoverable Calcium	DUP	1308571-07	58.535	60.783		mg/L	3.8		20		
	MS	1308571-07	58.535	71.686	10.000	mg/L		132		75 - 125	A03
	MSD	1308571-07	58.535	69.705	10.000	mg/L	2.8	112	20	75 - 125	
Total Recoverable Magnesium	DUP	1308571-07	19.523	20.070		mg/L	2.8		20		
	MS	1308571-07	19.523	30.872	10.000	mg/L		113		75 - 125	
	MSD	1308571-07	19.523	30.057	10.000	mg/L	2.7	105	20	75 - 125	
Total Recoverable Sodium	DUP	1308571-07	20.317	21.252		mg/L	4.5		20		
	MS	1308571-07	20.317	32.242	10.000	mg/L		119		75 - 125	
	MSD	1308571-07	20.317	31.211	10.000	mg/L	3.3	109	20	75 - 125	
Total Recoverable Potassium	DUP	1308571-07	2.8654	2.9915		mg/L	4.3		20		
	MS	1308571-07	2.8654	13.350	10.000	mg/L		105		75 - 125	
	MSD	1308571-07	2.8654	12.935	10.000	mg/L	3.2	101	20	75 - 125	
QC Batch ID: BWE0631	Used client sample: Y - Description: MW-17-5, 04/26/2013 07:20										
Perchlorate	DUP	1308571-03	3.7119	3.6888		ug/L	0.6		15		J
	MS	1308571-03	3.7119	12.381	10.101	ug/L		85.8		80 - 120	
	MSD	1308571-03	3.7119	13.008	10.101	ug/L	4.9	92.0	15	80 - 120	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2283						
Hexavalent Chromium	BWD2283-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWE0406						
Total Recoverable Iron	BWE0406-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWE0492						
Total Recoverable Iron	BWE0492-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWE0501						
Total Recoverable Arsenic	BWE0501-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE0501-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWE0501-BLK1	ND	ug/L	1.0	0.10	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2283										
Hexavalent Chromium	BWD2283-BS1	LCS	0.049039	0.050000	mg/L	98.1		85 - 115		
QC Batch ID: BWE0406										
Total Recoverable Iron	BWE0406-BS1	LCS	1074.4	1000.0	ug/L	107		85 - 115		
QC Batch ID: BWE0492										
Total Recoverable Iron	BWE0492-BS1	LCS	1098.0	1000.0	ug/L	110		85 - 115		
QC Batch ID: BWE0501										
Total Recoverable Arsenic	BWE0501-BS1	LCS	100.20	100.00	ug/L	100		85 - 115		
Total Recoverable Chromium	BWE0501-BS1	LCS	40.968	40.000	ug/L	102		85 - 115		
Total Recoverable Lead	BWE0501-BS1	LCS	107.56	100.00	ug/L	108		85 - 115		

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2283	Used client sample: Y - Description: MW-17-1, 04/26/2013 11:40										
Hexavalent Chromium	DUP	1308571-07	ND	ND		mg/L			10		
	MS	1308571-07	ND	0.048437	0.052632	mg/L		92.0		85 - 115	
	MSD	1308571-07	ND	0.048836	0.052632	mg/L	0.8	92.8	10	85 - 115	
QC Batch ID: BWE0406	Used client sample: N										
Total Recoverable Iron	DUP	1308873-01	375.86	371.65		ug/L	1.1		20		
	MS	1308873-01	375.86	1495.0	1000.0	ug/L		112		75 - 125	
	MSD	1308873-01	375.86	1475.6	1000.0	ug/L	1.3	110	20	75 - 125	
QC Batch ID: BWE0492	Used client sample: Y - Description: MW-17-1, 04/26/2013 11:40										
Total Recoverable Iron	DUP	1308571-07	279.82	299.98		ug/L	7.0		20		
	MS	1308571-07	279.82	1382.7	1000.0	ug/L		110		75 - 125	
	MSD	1308571-07	279.82	1358.7	1000.0	ug/L	1.8	108	20	75 - 125	
QC Batch ID: BWE0501	Used client sample: Y - Description: EB-5-42613, 04/26/2013 06:50										
Total Recoverable Arsenic	DUP	1308571-02	ND	ND		ug/L			20		
	MS	1308571-02	ND	103.08	100.00	ug/L		103		70 - 130	
	MSD	1308571-02	ND	99.506	100.00	ug/L	3.5	99.5	20	70 - 130	
Total Recoverable Chromium	DUP	1308571-02	ND	ND		ug/L			20		
	MS	1308571-02	ND	41.108	40.000	ug/L		103		70 - 130	
	MSD	1308571-02	ND	40.341	40.000	ug/L	1.9	101	20	70 - 130	
Total Recoverable Lead	DUP	1308571-02	ND	ND		ug/L			20		
	MS	1308571-02	ND	105.51	100.00	ug/L		106		70 - 130	
	MSD	1308571-02	ND	104.64	100.00	ug/L	0.8	105	20	70 - 130	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 13:34
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A03	The sample concentration is more than 4 times the spike level.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/16/2013

David Conner

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Project: JPL- GW Monitoring Wells
BC Work Order: 1308660
Invoice ID: B146320

Enclosed are the results of analyses for samples received by the laboratory on 4/29/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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Chain of Custody and Cooler Receipt Form for 1308660 Page 1 of 4

1308660

BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

page 1 of 2

Report & Bill to:

Name:	Battelle MHTS
Address:	505 King Ave.
City:	Columbus
State: OH	ZIP: 43201
Attn:	David Conner
Phone:	(614) 458-5489
Project:	2Q13 JPL
Project #:	
Samplers Name:	Andy Wolff

Analysis Requested

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
-1	TB-6-4/29/13	4-29-13	0600	AQ	X	X	X	X	X	X	X	X	X	X	X	X			X	
-2	SB-3-4/29/13		0620		X	X	X	X	X	X	X	X	X	X	X	X			X	
-3	EB-6-4/29/13		0625		X	X	X	X	X	X	X	X	X	X	X	X			X	
-4	MW-23-5		0650		X	X	X	X	X	X	X	X	X	X	X	X			X	Level IV
-5	MW-23-4		0720		X	X	X	X	X	X	X	X	X	X	X	X			X	
-6	MW-23-3		0750		X	X	X	X	X	X	X	X	X	X	X	X			X	
-7	MW-23-2		0820		X	X	X	X	X	X	X	X	X	X	X	X			X	MS/MSD
-8	MW-23-1		0850		X	X	X	X	X	X	X	X	X	X	X	X			X	
-9	MW-3-5		1000		X	X	X	X	X	X	X	X	X	X	X	X			X	Level IV
-10	MW-3-4		1030		X	X	X	X	X	X	X	X	X	X	X	X			X	
-11	MW-3-3		1100		X	X	X	X	X	X	X	X	X	X	X	X			X	
-12	MW-3-2	↓	1130	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	

Relinquished by: (Signature) Andy Wolff — Received By: Nicole — Date & Time 4/29/13 1500

Relinquished by: (Signature) Nicole — Received By: [signature] — Date & Time 4-29-13 1620

Relinquished by: (Signature) [signature] — Received By: KOR — Date & Time 4-29-13 1905

Chain of Custody and Cooler Receipt Form for 1308660 Page 2 of 4

1308660

BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

Page 2 of 2

Report & Bill to:

Name: Battelle MHTS
Phone: (614) 458-5489
Address: 505 King Ave.
Project: 2Q13 JPL
City: Columbus
Project #:
State: OH
ZIP: 43201
Samplers Name: Andy Wolff
Attn: David Conner

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix
-13	MW-3-1	4-29-13	1345	AQ

Analysis Requested

VOCs (524.2)
Total Cr (200.8)
Perchlorate (CADHS/ EPA 314.0)
Lead (200.8)
Arsenic (200.8)
Ca, Mg, K, Na, and Fe (200.8)
Alkalinity (SM2320B)
Bicarbonate and Carbonate (SM2320B)
Chloride, Nitrate as N, Sulfate (300.0)
Nitrite as N (353.2)
Total Dissolved Solids (SM2540C)
pH (150.1)
Orthophosphate (365.1)
1-4 Dioxane (8270C SIM)
Hexavalent Cr (7196A)
.NOTES

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

CHK BY
DISTRIBUTION
MA DAT MT
SUB OUT

Relinquished by: (Signature)	Received By:	Date & Time
Amy Wolff	Nicole	4/29/13 1500
Relinquished by: (Signature)	Received By:	Date & Time
Nicole		4-29-13 1620
Relinquished by: (Signature)	Received By:	Date & Time
	KOM	4-29-13 1905

Submission #: 1308660

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐ BC Lab Field Service ☑ Other ☐ (Specify)______	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)______

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

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

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

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: VOA Thermometer ID: 207 Date/Time 4-29-13 1905

Temperature: (A) 2.3 °C / (C) 2.2 °C Analyst Init KIQ

SAMPLE CONTAINERS	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL		B	B	B	B	B	B	B	B	B
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		C	C	C	C	C	C	C	C	C
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A(1)									
40ml VOA VIAL	~~A 3~~	A 3	A 3	A 3	A 3	A 3	A 3	A 6	A 3	A 3
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										

Comments:

Sample Numbering Completed By: SAS Date/Time: 4/29/13 1940

Chain of Custody and Cooler Receipt Form for 1308660 Page 4 of 4

Rev. No. 13 08/17/12 Page 2 of 2

Submission #: 1308660

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

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

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

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☑ Comments:

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

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: VOA Thermometer ID: 207
Temperature: (A) 2.3 °C / (C) 2.2 °C
Date/Time 4-29-13
Analyst Init KIQ 1905

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL	B	B	B							
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C	C	C							
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A 3	A 3	A 3							
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
4 OZ. JAR										
2 OZ. JAR										
FOIL SLEEVE										
VOH VIAL										
PLASTIC BAG										
FERROUS IRON										
SOIL JAR										
METALS										

SAS 4/29/13 1940

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308660-01	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 06:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-6-42913	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-6-42913	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308660-02	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 06:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB-3-42913	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): SB-3-42913	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308660-03	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 06:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-6-42913	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): EB-6-42913	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308660-04	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 06:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-5	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-23-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308660-05	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 07:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-4	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-23-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308660-06	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 07:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-3	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-23-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308660-07	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 08:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-2	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-23-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308660-08	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 08:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-23-1	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-23-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308660-09	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 10:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-5	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-3-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308660-10	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 10:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-4	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-3-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308660-11	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 11:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-3	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-3-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308660-12	**COC Number:**	---	**Receive Date:**	04/29/2013 19:05
	Project Number:	JPL-GW	**Sampling Date:**	04/29/2013 11:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-3-2	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			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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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1308660-13

COC Number: ---
Project Number: JPL-GW
Sampling Location: ---
Sampling Point: MW-3-1
Sampled By: Andy Wolff of BAT

Receive Date: 04/29/2013 19:05
Sampling Date: 04/29/2013 13:45
Sample Depth: ---
Lab Matrix: Water
Sample Type: Aqueous
Delivery Work Order:
Global ID: 0000000000
Location ID (FieldPoint): MW-3-1
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-01 | **Client Sample Name:** JPL-GW, TB-6-42913, 4/29/2013 6:00:00AM, Andy Wolff

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

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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-01 | **Client Sample Name:** JPL-GW, TB-6-42913, 4/29/2013 6:00:00AM, Andy Wolff

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

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-01 | **Client Sample Name:** JPL-GW, TB-6-42913, 4/29/2013 6:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	87.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 00:21	MGC	MS-V5	1	BWD2362

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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-01 | **Client Sample Name:** JPL-GW, TB-6-42913, 4/29/2013 6:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 00:21	MGC	MS-V5	1	BWD2362

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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-02 | **Client Sample Name:** JPL-GW, SB-3-42913, 4/29/2013 6:20:00AM, Andy Wolff

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

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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-02 | **Client Sample Name:** JPL-GW, SB-3-42913, 4/29/2013 6:20:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-02 | **Client Sample Name:** JPL-GW, SB-3-42913, 4/29/2013 6:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 00:43	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-02 | **Client Sample Name:** JPL-GW, SB-3-42913, 4/29/2013 6:20:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 00:43	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-02 | **Client Sample Name:** JPL-GW, SB-3-42913, 4/29/2013 6:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**0.024**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND	**J**	1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	ND	mg/L	0.50	0.17	EPA-200.7	ND		1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.19**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.10	**J**	3
Nitrate as N	ND	mg/L	0.10	0.025	EPA-300.0	ND		3
Sulfate	ND	mg/L	1.0	0.18	EPA-300.0	ND		3
pH	**5.81**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/07/13	05/07/13 15:35	JRG	PE-OP2	1	BWE0492
2	SM-2320B	05/02/13	05/02/13 13:53	FRP	MET-1	1	BWE0184
3	EPA-300.0	04/29/13	04/29/13 23:49	LS1	IC2	1	BWD2337
4	EPA-150.1	05/02/13	05/02/13 13:53	FRP	MET-1	1	BWE0184
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	0.667	BWD2352
6	EPA-353.2	04/30/13	04/30/13 00:15	LS1	KONE-1	1	BWE0058
7	EPA-314.0	05/08/13	05/08/13 15:21	LD1	IC6	1	BWE0697

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-02 | **Client Sample Name:** JPL-GW, SB-3-42913, 4/29/2013 6:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**19**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/29/13	04/29/13 22:37	LS1	KONE-1	1	BWE0060
2	EPA-200.8	05/08/13	05/08/13 19:20	SRM	PE-EL1	1	BWE0604
3	EPA-200.7	05/07/13	05/07/13 15:35	JRG	PE-OP2	1	BWE0492

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-03 | **Client Sample Name:** JPL-GW, EB-6-42913, 4/29/2013 6:25:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-03 | **Client Sample Name:** JPL-GW, EB-6-42913, 4/29/2013 6:25:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-03 | **Client Sample Name:** JPL-GW, EB-6-42913, 4/29/2013 6:25:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 01:06	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-03 | **Client Sample Name:** JPL-GW, EB-6-42913, 4/29/2013 6:25:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 01:06	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-03 | **Client Sample Name:** JPL-GW, EB-6-42913, 4/29/2013 6:25:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**0.031**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND	**J**	1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	ND	mg/L	0.50	0.17	EPA-200.7	ND		1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.14**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.10	**J**	3
Nitrate as N	0.042	mg/L	0.10	0.025	EPA-300.0	ND	J	3
Sulfate	ND	mg/L	1.0	0.18	EPA-300.0	ND		3
pH	**5.54**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/07/13	05/07/13 15:37	JRG	PE-OP2	1	BWE0492
2	SM-2320B	05/02/13	05/02/13 13:58	FRP	MET-1	1	BWE0184
3	EPA-300.0	04/29/13	04/30/13 00:03	LD1	IC2	1	BWD2337
4	EPA-150.1	05/02/13	05/02/13 13:58	FRP	MET-1	1	BWE0184
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	0.667	BWD2352
6	EPA-353.2	04/30/13	04/30/13 00:15	LS1	KONE-1	1	BWE0058
7	EPA-314.0	05/08/13	05/08/13 15:34	LD1	IC6	1	BWE0697

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-03 | **Client Sample Name:** JPL-GW, EB-6-42913, 4/29/2013 6:25:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**84**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/29/13	04/29/13 22:37	LS1	KONE-1	1	BWE0060
2	EPA-200.8	05/08/13	05/08/13 19:23	SRM	PE-EL1	1	BWE0604
3	EPA-200.7	05/07/13	05/07/13 15:37	JRG	PE-OP2	1	BWE0492

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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-04 | **Client Sample Name:** JPL-GW, MW-23-5, 4/29/2013 6:50:00AM, Andy Wolff

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

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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-04 | **Client Sample Name:** JPL-GW, MW-23-5, 4/29/2013 6:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.27**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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505 King Ave.
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-04 | **Client Sample Name:** JPL-GW, MW-23-5, 4/29/2013 6:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 01:28	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-04 | **Client Sample Name:** JPL-GW, MW-23-5, 4/29/2013 6:50:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 01:28	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-04 | **Client Sample Name:** JPL-GW, MW-23-5, 4/29/2013 6:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**4.2**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**0.30**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**88**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**120**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**42**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**9.2**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.10		3
Nitrate as N	0.039	mg/L	0.10	0.025	EPA-300.0	ND	J	3
Sulfate	**8.1**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**9.61**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**240**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/13	05/08/13 15:24	JRG	PE-OP2	1	BWE0599
2	SM-2320B	05/02/13	05/02/13 14:03	FRP	MET-1	1	BWE0184
3	EPA-300.0	04/29/13	04/30/13 00:16	LD1	IC2	1	BWD2337
4	EPA-150.1	05/02/13	05/02/13 14:03	FRP	MET-1	1	BWE0184
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	2	BWD2352
6	EPA-353.2	04/30/13	04/30/13 00:15	LS1	KONE-1	1	BWE0058
7	EPA-314.0	05/08/13	05/08/13 15:48	LD1	IC6	1	BWE0697

Battelle MHTS
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-04 | **Client Sample Name:** JPL-GW, MW-23-5, 4/29/2013 6:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**3.7**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**53**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	**0.15**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/29/13	04/29/13 22:37	LS1	KONE-1	1	BWE0060
2	EPA-200.8	05/08/13	05/08/13 19:26	SRM	PE-EL1	1	BWE0604
3	EPA-200.7	05/08/13	05/08/13 15:24	JRG	PE-OP2	1	BWE0599

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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-05 | **Client Sample Name:** JPL-GW, MW-23-4, 4/29/2013 7:20:00AM, Andy Wolff

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

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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-05 | **Client Sample Name:** JPL-GW, MW-23-4, 4/29/2013 7:20:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-05 | **Client Sample Name:** JPL-GW, MW-23-4, 4/29/2013 7:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 01:51	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-05 | **Client Sample Name:** JPL-GW, MW-23-4, 4/29/2013 7:20:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 01:51	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-05 | **Client Sample Name:** JPL-GW, MW-23-4, 4/29/2013 7:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**33**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**12**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**28**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**170**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**140**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**12**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.10		3
Nitrate as N	**3.9**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**8.4**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.22**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**230**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/13	05/08/13 15:34	JRG	PE-OP2	1	BWE0599
2	SM-2320B	05/02/13	05/02/13 14:56	FRP	MET-1	1	BWE0185
3	EPA-300.0	04/29/13	04/30/13 00:30	LD1	IC2	1	BWD2337
4	EPA-150.1	05/02/13	05/02/13 14:56	FRP	MET-1	1	BWE0185
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	2	BWD2352
6	EPA-353.2	04/30/13	04/30/13 00:15	LS1	KONE-1	1	BWE0058
7	EPA-314.0	05/08/13	05/08/13 16:01	LS1	IC6	1	BWE0697

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505 King Ave.
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-05 | **Client Sample Name:** JPL-GW, MW-23-4, 4/29/2013 7:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0023**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	**1.7**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**2.7**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/29/13	04/29/13 22:37	LS1	KONE-1	1	BWE0060
2	EPA-200.8	05/08/13	05/08/13 19:29	SRM	PE-EL1	1	BWE0604
3	EPA-200.7	05/08/13	05/08/13 15:34	JRG	PE-OP2	1	BWE0599

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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-06 | **Client Sample Name:** JPL-GW, MW-23-3, 4/29/2013 7:50:00AM, Andy Wolff

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

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505 King Ave.
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-06 | **Client Sample Name:** JPL-GW, MW-23-3, 4/29/2013 7:50:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-06 | **Client Sample Name:** JPL-GW, MW-23-3, 4/29/2013 7:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 02:14	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-06 | **Client Sample Name:** JPL-GW, MW-23-3, 4/29/2013 7:50:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 02:14	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-06 | **Client Sample Name:** JPL-GW, MW-23-3, 4/29/2013 7:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**44**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**15**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**31**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**170**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**140**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**27**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.10		3
Nitrate as N	**8.4**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**17**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.84**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**280**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.0**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/13	05/08/13 15:36	JRG	PE-OP2	1	BWE0599
2	SM-2320B	05/02/13	05/02/13 15:01	FRP	MET-1	1	BWE0185
3	EPA-300.0	04/29/13	04/30/13 01:11	LD1	IC2	1	BWD2337
4	EPA-150.1	05/02/13	05/02/13 15:01	FRP	MET-1	1	BWE0185
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	2	BWD2352
6	EPA-353.2	04/30/13	04/30/13 00:18	LS1	KONE-1	1	BWE0058
7	EPA-314.0	05/08/13	05/08/13 16:14	LS1	IC6	1	BWE0697

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-06 | **Client Sample Name:** JPL-GW, MW-23-3, 4/29/2013 7:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0029**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	**1.2**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**3.0**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/29/13	04/29/13 22:43	LS1	KONE-1	1	BWE0060
2	EPA-200.8	05/08/13	05/08/13 19:33	SRM	PE-EL1	1	BWE0604
3	EPA-200.7	05/08/13	05/08/13 15:36	JRG	PE-OP2	1	BWE0599

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-07 | **Client Sample Name:** JPL-GW, MW-23-2, 4/29/2013 8:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.56**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.19**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-07 | **Client Sample Name:** JPL-GW, MW-23-2, 4/29/2013 8:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.40**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.89**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-07 | **Client Sample Name:** JPL-GW, MW-23-2, 4/29/2013 8:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	86.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 02:36	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-07 | **Client Sample Name:** JPL-GW, MW-23-2, 4/29/2013 8:20:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 02:36	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-07 | **Client Sample Name:** JPL-GW, MW-23-2, 4/29/2013 8:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**120**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**45**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**36**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**270**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**220**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**110**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.10		3
Nitrate as N	**12**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**160**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.56**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**750**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.4**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/13	05/08/13 15:39	JRG	PE-OP2	1	BWE0599
2	SM-2320B	05/02/13	05/02/13 15:07	FRP	MET-1	2	BWE0185
3	EPA-300.0	04/29/13	04/30/13 01:24	LD1	IC2	1	BWD2337
4	EPA-150.1	05/02/13	05/02/13 15:07	FRP	MET-1	1	BWE0185
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	3.333	BWD2352
6	EPA-353.2	04/30/13	04/30/13 00:18	LS1	KONE-1	1	BWE0058
7	EPA-314.0	05/08/13	05/08/13 16:28	LS1	IC6	1	BWE0697

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-07 | **Client Sample Name:** JPL-GW, MW-23-2, 4/29/2013 8:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0015**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**0.82**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.9**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/29/13	04/29/13 22:43	LS1	KONE-1	1	BWE0060
2	EPA-200.8	05/08/13	05/08/13 19:36	SRM	PE-EL1	1	BWE0604
3	EPA-200.7	05/08/13	05/08/13 15:39	JRG	PE-OP2	1	BWE0599

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505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-08 | **Client Sample Name:** JPL-GW, MW-23-1, 4/29/2013 8:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.52**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.13**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.11**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-08 | **Client Sample Name:** JPL-GW, MW-23-1, 4/29/2013 8:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.31**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**2.8**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-08 | **Client Sample Name:** JPL-GW, MW-23-1, 4/29/2013 8:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	04/30/13 20:58	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-08 | **Client Sample Name:** JPL-GW, MW-23-1, 4/29/2013 8:50:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	04/30/13 20:58	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-08 | **Client Sample Name:** JPL-GW, MW-23-1, 4/29/2013 8:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**150**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**53**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**39**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**270**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**220**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**120**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.10		3
Nitrate as N	**13**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**190**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.26**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**800**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.7**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/13	05/08/13 15:09	JRG	PE-OP2	1	BWE0599
2	SM-2320B	05/02/13	05/02/13 15:13	FRP	MET-1	2	BWE0185
3	EPA-300.0	04/29/13	04/29/13 22:55	LS1	IC2	1	BWD2337
4	EPA-150.1	05/02/13	05/02/13 15:13	FRP	MET-1	1	BWE0185
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	5	BWD2352
6	EPA-353.2	04/30/13	04/30/13 00:15	LS1	KONE-1	1	BWE0058
7	EPA-314.0	05/08/13	05/08/13 16:41	LS1	IC6	1	BWE0697

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-08 | **Client Sample Name:** JPL-GW, MW-23-1, 4/29/2013 8:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**2.7**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**490**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/29/13	04/29/13 22:37	LS1	KONE-1	1	BWE0060
2	EPA-200.8	05/08/13	05/08/13 18:49	SRM	PE-EL1	1	BWE0604
3	EPA-200.7	05/08/13	05/08/13 15:09	JRG	PE-OP2	1	BWE0599

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-09 | **Client Sample Name:** JPL-GW, MW-3-5, 4/29/2013 10:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-09 | **Client Sample Name:** JPL-GW, MW-3-5, 4/29/2013 10:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-09 | **Client Sample Name:** JPL-GW, MW-3-5, 4/29/2013 10:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	86.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 02:59	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-09 | **Client Sample Name:** JPL-GW, MW-3-5, 4/29/2013 10:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 02:59	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-09 | **Client Sample Name:** JPL-GW, MW-3-5, 4/29/2013 10:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**34**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**12**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**39**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.4**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**24**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.10		3
Nitrate as N	**0.41**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**14**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.97**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**250**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	**0.012**	**mg/L**	**0.050**	**0.012**	**EPA-353.2**	ND	**J**	6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/13	05/08/13 15:41	JRG	PE-OP2	1	BWE0599
2	SM-2320B	05/02/13	05/02/13 15:19	FRP	MET-1	1	BWE0185
3	EPA-300.0	04/29/13	04/30/13 01:38	LD1	IC2	1	BWD2337
4	EPA-150.1	05/02/13	05/02/13 15:19	FRP	MET-1	1	BWE0185
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	2	BWD2352
6	EPA-353.2	04/30/13	04/30/13 00:18	LS1	KONE-1	1	BWE0058
7	EPA-314.0	05/08/13	05/08/13 16:54	LS1	IC6	1	BWE0697

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-09 | **Client Sample Name:** JPL-GW, MW-3-5, 4/29/2013 10:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.7**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.6**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**750**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/29/13	04/29/13 22:43	LS1	KONE-1	1	BWE0060
2	EPA-200.8	05/08/13	05/08/13 19:39	SRM	PE-EL1	1	BWE0604
3	EPA-200.7	05/08/13	05/08/13 15:41	JRG	PE-OP2	1	BWE0599

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/29/2013 10:30:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/29/2013 10:30:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/29/2013 10:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	87.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 03:21	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/29/2013 10:30:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 03:21	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/29/2013 10:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**38**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**13**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**39**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**24**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.10		3
Nitrate as N	**1.5**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**16**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.81**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**260**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/14/13	05/14/13 16:48	JRG	PE-OP2	1	BWE1055
2	SM-2320B	05/02/13	05/02/13 15:24	FRP	MET-1	1	BWE0185
3	EPA-300.0	04/29/13	04/30/13 01:52	LD1	IC2	1	BWD2337
4	EPA-150.1	05/02/13	05/02/13 15:24	FRP	MET-1	1	BWE0185
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	2	BWD2352
6	EPA-353.2	04/30/13	04/30/13 00:18	LS1	KONE-1	1	BWE0058
7	EPA-314.0	05/08/13	05/08/13 17:34	LS1	IC6	1	BWE0697

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-10 | **Client Sample Name:** JPL-GW, MW-3-4, 4/29/2013 10:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**18**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**34**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**10000**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/29/13	04/29/13 22:43	LS1	KONE-1	1	BWE0060
2	EPA-200.8	05/08/13	05/08/13 19:42	SRM	PE-EL1	1	BWE0604
3	EPA-200.7	05/08/13	05/08/13 15:44	JRG	PE-OP2	1	BWE0599

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/29/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.23**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/29/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.22**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/29/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	86.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 03:44	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/29/2013 11:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 03:44	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/29/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**39**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**13**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**39**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.4**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**25**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.10		3
Nitrate as N	**1.5**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**17**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.77**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**270**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/13	05/08/13 15:46	JRG	PE-OP2	1	BWE0599
2	SM-2320B	05/02/13	05/02/13 15:46	FRP	MET-1	1	BWE0186
3	EPA-300.0	04/29/13	04/30/13 02:05	LD1	IC2	1	BWD2337
4	EPA-150.1	05/02/13	05/02/13 15:46	FRP	MET-1	1	BWE0186
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	2	BWD2352
6	EPA-353.2	04/30/13	04/30/13 08:46	TDC	KONE-1	1	BWE0076
7	EPA-314.0	05/08/13	05/08/13 17:48	LS1	IC6	1	BWE0697

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-11 | **Client Sample Name:** JPL-GW, MW-3-3, 4/29/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0019**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**3.0**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**2.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**78**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 08:24	TDC	KONE-1	1	BWE0074
2	EPA-200.8	05/08/13	05/08/13 19:45	SRM	PE-EL1	1	BWE0604
3	EPA-200.7	05/08/13	05/08/13 15:46	JRG	PE-OP2	1	BWE0599

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/29/2013 11:30:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/29/2013 11:30:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/29/2013 11:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	86.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 04:06	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/29/2013 11:30:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 04:06	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/29/2013 11:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**47**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**15**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**19**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**7.9**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.12		3
Nitrate as N	**0.26**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**20**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.66**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**230**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/13	05/08/13 15:50	JRG	PE-OP2	1	BWE0599
2	SM-2320B	05/02/13	05/02/13 15:58	FRP	MET-1	1	BWE0186
3	EPA-300.0	04/29/13	04/30/13 02:46	LD1	IC2	1	BWD2338
4	EPA-150.1	05/02/13	05/02/13 15:58	FRP	MET-1	1	BWE0186
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	2	BWD2353
6	EPA-353.2	04/30/13	04/30/13 08:46	TDC	KONE-1	1	BWE0076
7	EPA-314.0	05/08/13	05/08/13 18:01	LS1	IC6	1	BWE0698

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-12 | **Client Sample Name:** JPL-GW, MW-3-2, 4/29/2013 11:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**90**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	**0.12**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 08:28	TDC	KONE-1	1	BWE0074
2	EPA-200.8	05/09/13	05/09/13 17:55	SRM	PE-EL1	1	BWE0743
3	EPA-200.7	05/08/13	05/08/13 15:50	JRG	PE-OP2	1	BWE0599

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/29/2013 1:45:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/29/2013 1:45:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308660-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/29/2013 1:45:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	87.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 04:29	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308660-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/29/2013 1:45:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	04/30/13	05/01/13 04:29	MGC	MS-V5	1	BWD2362

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308660-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/29/2013 1:45:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**51**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**17**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**24**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**260**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**11**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.12		3
Nitrate as N	**0.096**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND	**J**	3
Sulfate	**19**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.71**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**280**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/08/13	05/08/13 15:52	JRG	PE-OP2	1	BWE0599
2	SM-2320B	05/02/13	05/02/13 16:05	FRP	MET-1	1	BWE0186
3	EPA-300.0	04/29/13	04/30/13 04:08	LD1	IC2	1	BWD2338
4	EPA-150.1	05/02/13	05/02/13 16:05	FRP	MET-1	1	BWE0186
5	EPA-160.1	04/30/13	04/30/13 09:25	NW1	MANUAL	2	BWD2353
6	EPA-353.2	04/30/13	04/30/13 08:46	TDC	KONE-1	1	BWE0076
7	EPA-314.0	05/08/13	05/08/13 18:14	LS1	IC6	1	BWE0698

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308660-13 | **Client Sample Name:** JPL-GW, MW-3-1, 4/29/2013 1:45:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**1800**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 08:28	TDC	KONE-1	1	BWE0074
2	EPA-200.8	05/09/13	05/09/13 17:58	SRM	PE-EL1	1	BWE0743
3	EPA-200.7	05/08/13	05/08/13 15:52	JRG	PE-OP2	1	BWE0599

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2362						
Benzene	BWD2362-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWD2362-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWD2362-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWD2362-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWD2362-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWD2362-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWD2362-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWD2362-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWD2362-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWD2362-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWD2362-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWD2362-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWD2362-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWD2362-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWD2362-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWD2362-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BWD2362-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWD2362-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWD2362-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWD2362-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWD2362-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWD2362-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWD2362-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWD2362-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWD2362-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWD2362-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWD2362-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWD2362-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWD2362-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWD2362-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWD2362-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWD2362-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWD2362-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWD2362-BLK1	ND	ug/L	0.50	0.14	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWD2362						
trans-1,3-Dichloropropene	BWD2362-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWD2362-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWD2362-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWD2362-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWD2362-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWD2362-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWD2362-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWD2362-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWD2362-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWD2362-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWD2362-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWD2362-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWD2362-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWD2362-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWD2362-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWD2362-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BWD2362-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWD2362-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWD2362-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWD2362-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWD2362-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWD2362-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWD2362-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWD2362-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWD2362-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWD2362-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWD2362-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWD2362-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWD2362-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWD2362-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWD2362-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWD2362-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWD2362-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWD2362-BLK1	ND	ug/L	4.0	0.97	

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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: BWD2362						
Ethyl t-butyl ether	BWD2362-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWD2362-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWD2362-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWD2362-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWD2362-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWD2362-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWD2362-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWD2362-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWD2362-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWD2362-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWD2362-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWD2362-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWD2362-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWD2362-BLK1	110	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWD2362-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWD2362-BLK1	88.9	%	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: BWD2362										
Benzene	BWD2362-BS1	LCS	28.500	25.000	ug/L	114		70 - 130		
Bromodichloromethane	BWD2362-BS1	LCS	28.420	25.000	ug/L	114		70 - 130		
Chlorobenzene	BWD2362-BS1	LCS	25.910	25.000	ug/L	104		70 - 130		
Chloroethane	BWD2362-BS1	LCS	29.320	25.000	ug/L	117		70 - 130		
1,4-Dichlorobenzene	BWD2362-BS1	LCS	28.130	25.000	ug/L	113		70 - 130		
1,1-Dichloroethane	BWD2362-BS1	LCS	26.920	25.000	ug/L	108		70 - 130		
1,1-Dichloroethene	BWD2362-BS1	LCS	27.750	25.000	ug/L	111		70 - 130		
Toluene	BWD2362-BS1	LCS	27.500	25.000	ug/L	110		70 - 130		
Trichloroethene	BWD2362-BS1	LCS	28.140	25.000	ug/L	113		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWD2362-BS1	LCS	10.960	10.000	ug/L	110		75 - 125		
Toluene-d8 (Surrogate)	BWD2362-BS1	LCS	10.380	10.000	ug/L	104		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWD2362-BS1	LCS	10.430	10.000	ug/L	104		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: BWD2362	Used client sample: Y - Description: MW-23-1, 04/29/2013 08:50										
Benzene	MS	1308660-08	ND	28.770	25.000	ug/L		115		70 - 130	
	MSD	1308660-08	ND	27.350	25.000	ug/L	5.1	109	20	70 - 130	
Bromodichloromethane	MS	1308660-08	ND	29.740	25.000	ug/L		119		70 - 130	
	MSD	1308660-08	ND	27.750	25.000	ug/L	6.9	111	20	70 - 130	
Chlorobenzene	MS	1308660-08	ND	26.900	25.000	ug/L		108		70 - 130	
	MSD	1308660-08	ND	25.480	25.000	ug/L	5.4	102	20	70 - 130	
Chloroethane	MS	1308660-08	ND	30.850	25.000	ug/L		123		70 - 130	
	MSD	1308660-08	ND	29.550	25.000	ug/L	4.3	118	20	70 - 130	
1,4-Dichlorobenzene	MS	1308660-08	ND	28.670	25.000	ug/L		115		70 - 130	
	MSD	1308660-08	ND	27.260	25.000	ug/L	5.0	109	20	70 - 130	
1,1-Dichloroethane	MS	1308660-08	0.13000	27.730	25.000	ug/L		110		70 - 130	
	MSD	1308660-08	0.13000	26.510	25.000	ug/L	4.5	106	20	70 - 130	
1,1-Dichloroethene	MS	1308660-08	ND	28.480	25.000	ug/L		114		70 - 130	
	MSD	1308660-08	ND	26.870	25.000	ug/L	5.8	107	20	70 - 130	
Toluene	MS	1308660-08	ND	28.450	25.000	ug/L		114		70 - 130	
	MSD	1308660-08	ND	26.720	25.000	ug/L	6.3	107	20	70 - 130	
Trichloroethene	MS	1308660-08	2.7800	34.110	25.000	ug/L		125		70 - 130	
	MSD	1308660-08	2.7800	27.800	25.000	ug/L	20.4	100	20	70 - 130	Q02
1,2-Dichloroethane-d4 (Surrogate)	MS	1308660-08	ND	10.430	10.000	ug/L		104		75 - 125	
	MSD	1308660-08	ND	10.820	10.000	ug/L	3.7	108		75 - 125	
Toluene-d8 (Surrogate)	MS	1308660-08	ND	10.290	10.000	ug/L		103		80 - 120	
	MSD	1308660-08	ND	10.290	10.000	ug/L	0	103		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1308660-08	ND	10.180	10.000	ug/L		102		80 - 120	
	MSD	1308660-08	ND	10.300	10.000	ug/L	1.2	103		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: BWD2362						
Chloroacetonitrile	BWD2362-BLK1	0	ug/L			
1-Chlorobutane	BWD2362-BLK1	0	ug/L			
1,1-Dichloropropanone	BWD2362-BLK1	0	ug/L			
Methyl acrylate	BWD2362-BLK1	0	ug/L			
Nitrobenzene	BWD2362-BLK1	0	ug/L			
2-Nitropropane	BWD2362-BLK1	0	ug/L			

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWD2337						
Chloride	BWD2337-BLK1	0.10300	mg/L	0.50	0.067	J
Nitrate as N	BWD2337-BLK1	ND	mg/L	0.10	0.025	
Sulfate	BWD2337-BLK1	ND	mg/L	1.0	0.18	
QC Batch ID: BWD2338						
Chloride	BWD2338-BLK1	0.11900	mg/L	0.50	0.067	J
Nitrate as N	BWD2338-BLK1	ND	mg/L	0.10	0.025	
Sulfate	BWD2338-BLK1	ND	mg/L	1.0	0.18	
QC Batch ID: BWD2352						
Total Dissolved Solids @ 180 C	BWD2352-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWD2353						
Total Dissolved Solids @ 180 C	BWD2353-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWE0058						
Nitrite as N	BWE0058-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWE0076						
Nitrite as N	BWE0076-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWE0184						
Bicarbonate	BWE0184-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0184-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0184-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0185						
Bicarbonate	BWE0185-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0185-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0185-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0186						
Bicarbonate	BWE0186-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0186-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0186-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0492						
Total Recoverable Calcium	BWE0492-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0492-BLK1	ND	mg/L	0.050	0.020	

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0492						
Total Recoverable Sodium	BWE0492-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0492-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWE0599						
Total Recoverable Calcium	BWE0599-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0599-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0599-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0599-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWE0697						
Perchlorate	BWE0697-BLK1	ND	ug/L	4.0	0.81	
QC Batch ID: BWE0698						
Perchlorate	BWE0698-BLK1	ND	ug/L	4.0	0.81	
QC Batch ID: BWE1055						
Total Recoverable Calcium	BWE1055-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE1055-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE1055-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE1055-BLK1	ND	mg/L	1.0	0.10	

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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: BWD2337										
Chloride	BWD2337-BS1	LCS	47.525	50.000	mg/L	95.0		90 - 110		
Nitrate as N	BWD2337-BS1	LCS	4.7490	5.0000	mg/L	95.0		90 - 110		
Sulfate	BWD2337-BS1	LCS	94.918	100.00	mg/L	94.9		90 - 110		
QC Batch ID: BWD2338										
Chloride	BWD2338-BS1	LCS	50.925	50.000	mg/L	102		90 - 110		
Nitrate as N	BWD2338-BS1	LCS	4.9970	5.0000	mg/L	99.9		90 - 110		
Sulfate	BWD2338-BS1	LCS	101.19	100.00	mg/L	101		90 - 110		
QC Batch ID: BWD2352										
Total Dissolved Solids @ 180 C	BWD2352-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
QC Batch ID: BWD2353										
Total Dissolved Solids @ 180 C	BWD2353-BS1	LCS	580.00	586.00	mg/L	99.0		90 - 110		
QC Batch ID: BWE0058										
Nitrite as N	BWE0058-BS1	LCS	0.48232	0.50000	mg/L	96.5		90 - 110		
QC Batch ID: BWE0076										
Nitrite as N	BWE0076-BS1	LCS	0.49837	0.50000	mg/L	99.7		90 - 110		
QC Batch ID: BWE0184										
Total Alkalinity as CaCO3	BWE0184-BS3	LCS	101.02	100.00	mg/L	101		90 - 110		
pH	BWE0184-BS2	LCS	7.0500	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0185										
Total Alkalinity as CaCO3	BWE0185-BS3	LCS	100.56	100.00	mg/L	101		90 - 110		
pH	BWE0185-BS2	LCS	7.0400	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0186										
Total Alkalinity as CaCO3	BWE0186-BS3	LCS	101.93	100.00	mg/L	102		90 - 110		
pH	BWE0186-BS2	LCS	7.0400	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0492										
Total Recoverable Calcium	BWE0492-BS1	LCS	10.749	10.000	mg/L	107		85 - 115		
Total Recoverable Magnesium	BWE0492-BS1	LCS	10.779	10.000	mg/L	108		85 - 115		
Total Recoverable Sodium	BWE0492-BS1	LCS	10.378	10.000	mg/L	104		85 - 115		
Total Recoverable Potassium	BWE0492-BS1	LCS	10.236	10.000	mg/L	102		85 - 115		
QC Batch ID: BWE0599										
Total Recoverable Calcium	BWE0599-BS1	LCS	10.141	10.000	mg/L	101		85 - 115		
Total Recoverable Magnesium	BWE0599-BS1	LCS	10.223	10.000	mg/L	102		85 - 115		

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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: BWE0599										
Total Recoverable Sodium	BWE0599-BS1	LCS	10.056	10.000	mg/L	101		85 - 115		
Total Recoverable Potassium	BWE0599-BS1	LCS	9.7251	10.000	mg/L	97.3		85 - 115		
QC Batch ID: BWE0697										
Perchlorate	BWE0697-BS1	LCS	8.8671	10.000	ug/L	88.7		85 - 115		
QC Batch ID: BWE0698										
Perchlorate	BWE0698-BS1	LCS	10.394	10.000	ug/L	104		85 - 115		
QC Batch ID: BWE1055										
Total Recoverable Calcium	BWE1055-BS1	LCS	10.265	10.000	mg/L	103		85 - 115		
Total Recoverable Magnesium	BWE1055-BS1	LCS	10.338	10.000	mg/L	103		85 - 115		
Total Recoverable Sodium	BWE1055-BS1	LCS	9.7639	10.000	mg/L	97.6		85 - 115		
Total Recoverable Potassium	BWE1055-BS1	LCS	9.5894	10.000	mg/L	95.9		85 - 115		

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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: BWD2337	Used client sample: Y - Description: MW-23-1, 04/29/2013 08:50										
Chloride	DUP	1308660-08	120.97	120.88		mg/L	0.1		10		
	MS	1308660-08	120.97	167.56	50.505	mg/L		92.2		80 - 120	
	MSD	1308660-08	120.97	167.88	50.505	mg/L	0.2	92.9	10	80 - 120	
Nitrate as N	DUP	1308660-08	13.319	13.379		mg/L	0.4		10		
	MS	1308660-08	13.319	18.236	5.0505	mg/L		97.4		80 - 120	
	MSD	1308660-08	13.319	18.296	5.0505	mg/L	0.3	98.5	10	80 - 120	
Sulfate	DUP	1308660-08	194.74	194.72		mg/L	0.0		10		
	MS	1308660-08	194.74	294.66	101.01	mg/L		98.9		80 - 120	
	MSD	1308660-08	194.74	294.17	101.01	mg/L	0.2	98.4	10	80 - 120	
QC Batch ID: BWD2338	Used client sample: Y - Description: MW-3-2, 04/29/2013 11:30										
Chloride	DUP	1308660-12	7.8750	7.7380		mg/L	1.8		10		
	MS	1308660-12	7.8750	60.824	50.505	mg/L		105		80 - 120	
	MSD	1308660-12	7.8750	60.849	50.505	mg/L	0.0	105	10	80 - 120	
Nitrate as N	DUP	1308660-12	0.25700	0.26600		mg/L	3.4		10		
	MS	1308660-12	0.25700	5.3556	5.0505	mg/L		101		80 - 120	
	MSD	1308660-12	0.25700	5.2737	5.0505	mg/L	1.5	99.3	10	80 - 120	
Sulfate	DUP	1308660-12	19.940	19.713		mg/L	1.1		10		
	MS	1308660-12	19.940	126.32	101.01	mg/L		105		80 - 120	
	MSD	1308660-12	19.940	126.80	101.01	mg/L	0.4	106	10	80 - 120	
QC Batch ID: BWD2352	Used client sample: Y - Description: MW-23-1, 04/29/2013 08:50										
Total Dissolved Solids @ 180 C	DUP	1308660-08	805.00	790.00		mg/L	1.9		10		
QC Batch ID: BWD2353	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1308567-02	965.00	980.00		mg/L	1.5		10		
QC Batch ID: BWE0058	Used client sample: Y - Description: MW-23-1, 04/29/2013 08:50										
Nitrite as N	DUP	1308660-08	ND	ND		mg/L			10		
	MS	1308660-08	ND	0.57015	0.52632	mg/L		108		90 - 110	
	MSD	1308660-08	ND	0.55434	0.52632	mg/L	2.8	105	10	90 - 110	
QC Batch ID: BWE0076	Used client sample: Y - Description: MW-3-3, 04/29/2013 11:00										
Nitrite as N	DUP	1308660-11	ND	ND		mg/L			10		
	MS	1308660-11	ND	0.53429	0.52632	mg/L		102		90 - 110	
	MSD	1308660-11	ND	0.52711	0.52632	mg/L	1.4	100	10	90 - 110	
QC Batch ID: BWE0184	Used client sample: Y - Description: MW-26-1, 04/26/2013 13:20										
Bicarbonate	DUP	1308571-09	293.08	301.98		mg/L	3.0		10		
Carbonate	DUP	1308571-09	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308571-09	240.37	247.67		mg/L	3.0		10		
pH	DUP	1308571-09	7.3500	7.3300		pH Units	0.3		20		

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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: BWE0185	Used client sample: N										
Bicarbonate	DUP	1308937-01	58.806	59.537		mg/L	1.2		10		
Carbonate	DUP	1308937-01	5.1083	5.2882		mg/L	3.5		10		
Total Alkalinity as CaCO3	DUP	1308937-01	56.750	57.660		mg/L	1.6		10		
pH	DUP	1308937-01	8.6900	8.7200		pH Units	0.3		20		
QC Batch ID: BWE0186	Used client sample: Y - Description: MW-3-3, 04/29/2013 11:00										
Bicarbonate	DUP	1308660-11	202.92	203.49		mg/L	0.3		10		
Carbonate	DUP	1308660-11	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308660-11	166.43	166.89		mg/L	0.3		10		
pH	DUP	1308660-11	7.7700	7.7800		pH Units	0.1		20		
QC Batch ID: BWE0492	Used client sample: Y - Description: MW-17-1, 04/26/2013 11:40										
Total Recoverable Calcium	DUP	1308571-07	58.535	60.783		mg/L	3.8		20		
	MS	1308571-07	58.535	71.686	10.000	mg/L		132		75 - 125	A03
	MSD	1308571-07	58.535	69.705	10.000	mg/L	2.8	112	20	75 - 125	
Total Recoverable Magnesium	DUP	1308571-07	19.523	20.070		mg/L	2.8		20		
	MS	1308571-07	19.523	30.872	10.000	mg/L		113		75 - 125	
	MSD	1308571-07	19.523	30.057	10.000	mg/L	2.7	105	20	75 - 125	
Total Recoverable Sodium	DUP	1308571-07	20.317	21.252		mg/L	4.5		20		
	MS	1308571-07	20.317	32.242	10.000	mg/L		119		75 - 125	
	MSD	1308571-07	20.317	31.211	10.000	mg/L	3.3	109	20	75 - 125	
Total Recoverable Potassium	DUP	1308571-07	2.8654	2.9915		mg/L	4.3		20		
	MS	1308571-07	2.8654	13.350	10.000	mg/L		105		75 - 125	
	MSD	1308571-07	2.8654	12.935	10.000	mg/L	3.2	101	20	75 - 125	
QC Batch ID: BWE0599	Used client sample: Y - Description: MW-23-1, 04/29/2013 08:50										
Total Recoverable Calcium	DUP	1308660-08	151.58	147.22		mg/L	2.9		20		
	MS	1308660-08	151.58	160.12	10.000	mg/L		85.4		75 - 125	
	MSD	1308660-08	151.58	155.90	10.000	mg/L	2.7	43.2	20	75 - 125	A03
Total Recoverable Magnesium	DUP	1308660-08	52.642	51.016		mg/L	3.1		20		
	MS	1308660-08	52.642	62.607	10.000	mg/L		99.6		75 - 125	
	MSD	1308660-08	52.642	60.970	10.000	mg/L	2.6	83.3	20	75 - 125	
Total Recoverable Sodium	DUP	1308660-08	39.292	37.949		mg/L	3.5		20		
	MS	1308660-08	39.292	50.028	10.000	mg/L		107		75 - 125	
	MSD	1308660-08	39.292	48.175	10.000	mg/L	3.8	88.8	20	75 - 125	
Total Recoverable Potassium	DUP	1308660-08	3.1038	2.9875		mg/L	3.8		20		
	MS	1308660-08	3.1038	13.656	10.000	mg/L		106		75 - 125	
	MSD	1308660-08	3.1038	13.200	10.000	mg/L	3.4	101	20	75 - 125	
QC Batch ID: BWE0697	Used client sample: Y - Description: MW-23-1, 04/29/2013 08:50										

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0697	Used client sample: Y - Description: MW-23-1, 04/29/2013 08:50										
Perchlorate	DUP	1308660-08	2.7086	2.6534		ug/L	2.1		15		J
	MS	1308660-08	2.7086	12.751	10.101	ug/L		99.4		80 - 120	
	MSD	1308660-08	2.7086	11.647	10.101	ug/L	9.0	88.5	15	80 - 120	
QC Batch ID: BWE0698	Used client sample: Y - Description: MW-3-2, 04/29/2013 11:30										
Perchlorate	DUP	1308660-12	ND	ND		ug/L			15		
	MS	1308660-12	ND	8.1285	10.101	ug/L		80.5		80 - 120	
	MSD	1308660-12	ND	8.2764	10.101	ug/L	1.8	81.9	15	80 - 120	
QC Batch ID: BWE1055	Used client sample: N										
Total Recoverable Calcium	DUP	1309213-01	ND	ND		mg/L			20		
	MS	1309213-01	ND	10.199	10.000	mg/L		102		75 - 125	
	MSD	1309213-01	ND	10.540	10.000	mg/L	3.3	105	20	75 - 125	
Total Recoverable Magnesium	DUP	1309213-01	ND	ND		mg/L			20		
	MS	1309213-01	ND	10.330	10.000	mg/L		103		75 - 125	
	MSD	1309213-01	ND	10.573	10.000	mg/L	2.3	106	20	75 - 125	
Total Recoverable Sodium	DUP	1309213-01	0.49635	0.51817		mg/L	4.3		20		
	MS	1309213-01	0.49635	10.204	10.000	mg/L		97.1		75 - 125	
	MSD	1309213-01	0.49635	10.554	10.000	mg/L	3.4	101	20	75 - 125	
Total Recoverable Potassium	DUP	1309213-01	ND	ND		mg/L			20		
	MS	1309213-01	ND	9.5582	10.000	mg/L		95.6		75 - 125	
	MSD	1309213-01	ND	9.8814	10.000	mg/L	3.3	98.8	20	75 - 125	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0060						
Hexavalent Chromium	BWE0060-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWE0074						
Hexavalent Chromium	BWE0074-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWE0492						
Total Recoverable Iron	BWE0492-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWE0599						
Total Recoverable Iron	BWE0599-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWE0604						
Total Recoverable Arsenic	BWE0604-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE0604-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWE0604-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BWE0743						
Total Recoverable Arsenic	BWE0743-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE0743-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWE0743-BLK1	ND	ug/L	1.0	0.10	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0060										
Hexavalent Chromium	BWE0060-BS1	LCS	0.048863	0.050000	mg/L	97.7		85 - 115		
QC Batch ID: BWE0074										
Hexavalent Chromium	BWE0074-BS1	LCS	0.051996	0.050000	mg/L	104		85 - 115		
QC Batch ID: BWE0492										
Total Recoverable Iron	BWE0492-BS1	LCS	1098.0	1000.0	ug/L	110		85 - 115		
QC Batch ID: BWE0599										
Total Recoverable Iron	BWE0599-BS1	LCS	1039.8	1000.0	ug/L	104		85 - 115		
QC Batch ID: BWE0604										
Total Recoverable Arsenic	BWE0604-BS1	LCS	97.339	100.00	ug/L	97.3		85 - 115		
Total Recoverable Chromium	BWE0604-BS1	LCS	40.256	40.000	ug/L	101		85 - 115		
Total Recoverable Lead	BWE0604-BS1	LCS	102.60	100.00	ug/L	103		85 - 115		
QC Batch ID: BWE0743										
Total Recoverable Arsenic	BWE0743-BS1	LCS	92.697	100.00	ug/L	92.7		85 - 115		
Total Recoverable Chromium	BWE0743-BS1	LCS	37.556	40.000	ug/L	93.9		85 - 115		
Total Recoverable Lead	BWE0743-BS1	LCS	97.555	100.00	ug/L	97.6		85 - 115		

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0060	Used client sample: Y - Description: MW-23-1, 04/29/2013 08:50										
Hexavalent Chromium	DUP	1308660-08	ND	ND		mg/L			10		
	MS	1308660-08	ND	0.051864	0.052632	mg/L		98.5		85 - 115	
	MSD	1308660-08	ND	0.051781	0.052632	mg/L	0.2	98.4	10	85 - 115	
QC Batch ID: BWE0074	Used client sample: Y - Description: MW-3-3, 04/29/2013 11:00										
Hexavalent Chromium	DUP	1308660-11	0.0018940	0.0011530		mg/L	48.6		10		J,A02
	MS	1308660-11	0.0018940	0.052401	0.052632	mg/L		96.0		85 - 115	
	MSD	1308660-11	0.0018940	0.052695	0.052632	mg/L	0.6	96.5	10	85 - 115	
QC Batch ID: BWE0492	Used client sample: Y - Description: MW-17-1, 04/26/2013 11:40										
Total Recoverable Iron	DUP	1308571-07	279.82	299.98		ug/L	7.0		20		
	MS	1308571-07	279.82	1382.7	1000.0	ug/L		110		75 - 125	
	MSD	1308571-07	279.82	1358.7	1000.0	ug/L	1.8	108	20	75 - 125	
QC Batch ID: BWE0599	Used client sample: Y - Description: MW-23-1, 04/29/2013 08:50										
Total Recoverable Iron	DUP	1308660-08	493.91	457.44		ug/L	7.7		20		
	MS	1308660-08	493.91	1567.7	1000.0	ug/L		107		75 - 125	
	MSD	1308660-08	493.91	1507.7	1000.0	ug/L	3.9	101	20	75 - 125	
QC Batch ID: BWE0604	Used client sample: Y - Description: MW-23-1, 04/29/2013 08:50										
Total Recoverable Arsenic	DUP	1308660-08	ND	ND		ug/L			20		
	MS	1308660-08	ND	98.614	100.00	ug/L		98.6		70 - 130	
	MSD	1308660-08	ND	104.71	100.00	ug/L	6.0	105	20	70 - 130	
Total Recoverable Chromium	DUP	1308660-08	2.6710	3.0000		ug/L	11.6		20		
	MS	1308660-08	2.6710	37.872	40.000	ug/L		88.0		70 - 130	
	MSD	1308660-08	2.6710	39.766	40.000	ug/L	4.9	92.7	20	70 - 130	
Total Recoverable Lead	DUP	1308660-08	ND	ND		ug/L			20		
	MS	1308660-08	ND	94.421	100.00	ug/L		94.4		70 - 130	
	MSD	1308660-08	ND	102.46	100.00	ug/L	8.2	102	20	70 - 130	
QC Batch ID: BWE0743	Used client sample: Y - Description: MW-12-4, 04/30/2013 08:20										
Total Recoverable Arsenic	DUP	1308753-04	1.7300	1.6770		ug/L	3.1		20		J
	MS	1308753-04	1.7300	98.016	100.00	ug/L		96.3		70 - 130	
	MSD	1308753-04	1.7300	98.720	100.00	ug/L	0.7	97.0	20	70 - 130	
Total Recoverable Chromium	DUP	1308753-04	0.83100	0.89400		ug/L	7.3		20		J
	MS	1308753-04	0.83100	36.914	40.000	ug/L		90.2		70 - 130	
	MSD	1308753-04	0.83100	36.605	40.000	ug/L	0.8	89.4	20	70 - 130	
Total Recoverable Lead	DUP	1308753-04	ND	ND		ug/L			20		
	MS	1308753-04	ND	94.633	100.00	ug/L		94.6		70 - 130	
	MSD	1308753-04	ND	98.293	100.00	ug/L	3.8	98.3	20	70 - 130	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 15:12
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A02	The difference between duplicate readings is less than the PQL.
A03	The sample concentration is more than 4 times the spike level.
Q02	Matrix spike precision is not within the control limits.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/15/2013

David Conner

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Project:	JPL- GW Monitoring Wells
BC Work Order:	1308753
Invoice ID:	B146189

Enclosed are the results of analyses for samples received by the laboratory on 4/30/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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Chain of Custody and Cooler Receipt Form for 1308753 Page 1 of 6

BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

Page 1 of 2

Report & Bill to:

Name:	Battelle MHTS
Address:	505 King Ave.
City:	Columbus
State: OH	ZIP: 43201
Attn:	David Conner
Phone:	(614) 458-5489
Project:	2Q13 JPL
Project #:	
Samplers Name:	Andy Wolff

1308753

Analysis Requested

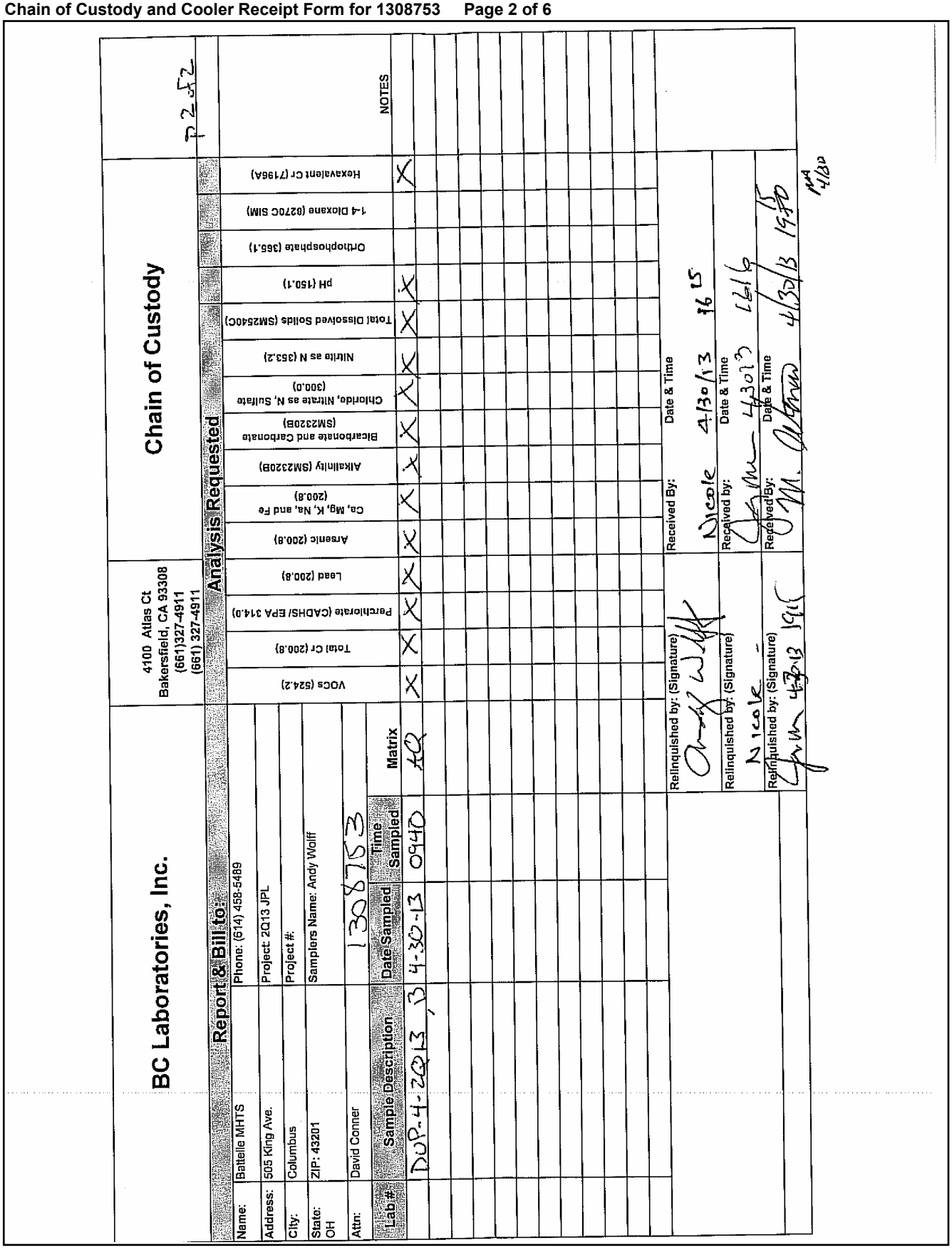
Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
	TB-7-4/30/13 -1	4-30-13	0700	AQ	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
	EB-7-4/30/13 -2		0710		X	X	X	X	X	X	X	X	X	X	X	X	X		X	
	MW-12-5 -3		0745		X	X	X	X	X	X	X	X	X	X	X	X	X		X	
	MW-12-4 -4		0820		X	X	X	X	X	X	X	X	X	X	X	X	X		X	MS/MSD
	MW-12-3 -5		0900		X	X	X	X	X	X	X	X	X	X	X	X	X		X	
	MW-12-2 -6		0935		X	X	X	X	X	X	X	X	X	X	X	X	X		X	
	MW-12-1 -7		1050		X	X	X	X	X	X	X	X	X	X	X	X	X		X	Level IV
	MW-24-5 -8		1205		X	X	X	X	X	X	X	X	X	X	X	X	X		X	
	MW-24-4 -9		1240		X	X	X	X	X	X	X	X	X	X	X	X	X		X	
	MW-24-3 -10		1310		X	X	X	X	X	X	X	X	X	X	X	X	X		X	
	MW-24-2 -11		1335 1345		X	X	X	X	X	X	X	X	X	X	X	X	X		X	MS/MSD
	MW-24-1 -12	↓	1420	↓	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Relinquished by: (Signature) Andy Wolff Date & Time 4/30/13 1615 Received By: Nicole

Relinquished by: (Signature) Nicole Date & Time 4-30-13 1715 Received by: Jen Mut

Relinquished by: (Signature) Jen Mut Date & Time 4/30/13 1915 Received By: M. Gallegos

Chain of Custody and Cooler Receipt Form for 1308753 Page 2 of 6



BC Laboratories, Inc.

Chain of Custody

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

P2 of 2

Report & Bill to:

Name: Battelle MHTS
Phone: (614) 458-5489
Address: 505 King Ave.
Project: 2Q13 JPL
City: Columbus
Project #:
State: OH
ZIP: 43201
Samplers Name: Andy Wolff
Attn: David Conner
1308753

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
	DUP-4-2013_13	4-30-13	0940	aq	X	X	X	X	X	X	X	X	X	X	X	X			X	

Analysis Requested

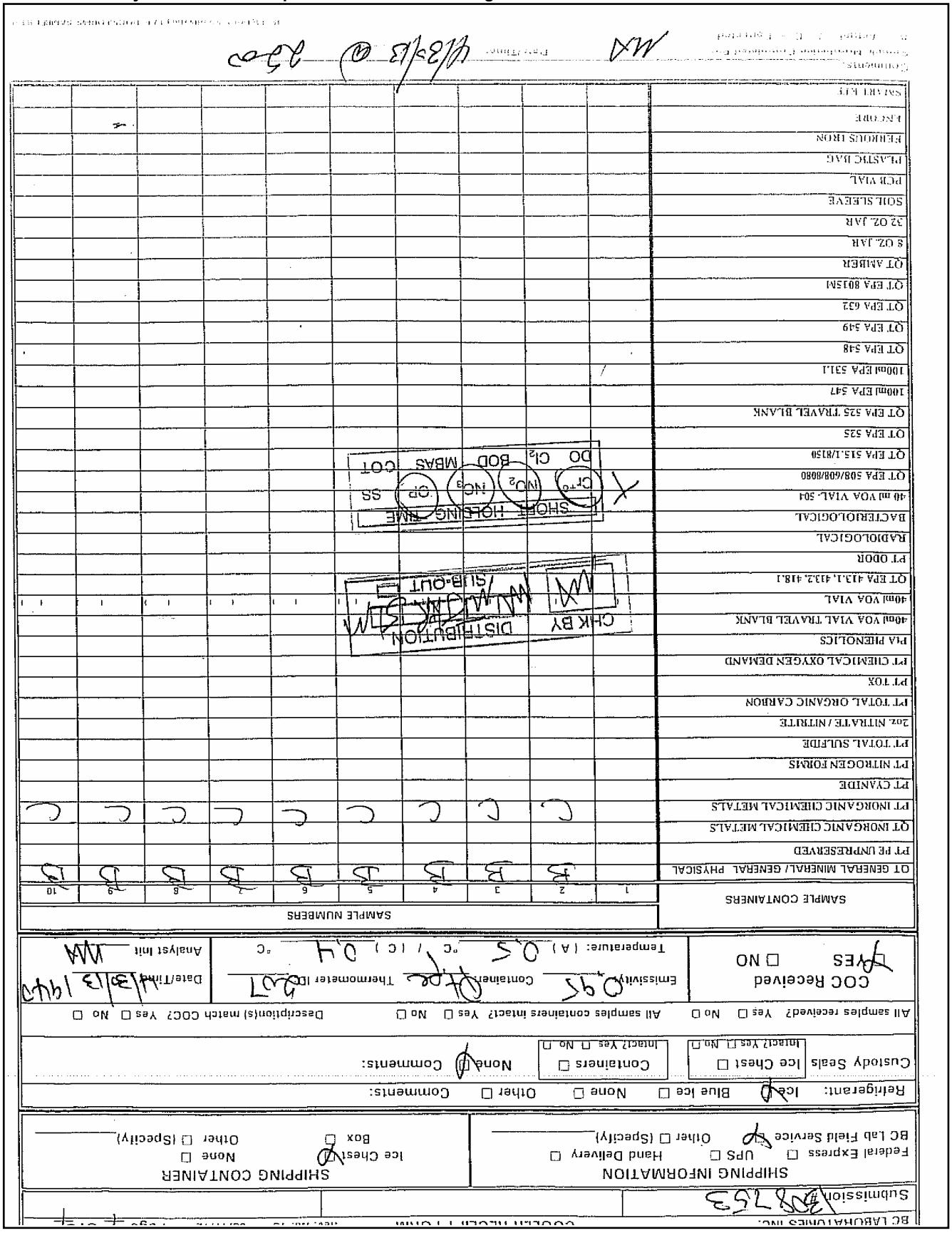
Relinquished by: (Signature) Andy Wolff — Received By: Nicole — Date & Time 4/30/13 1615

Relinquished by: (Signature) Nicole — Received by: [signature] 430/13 1216

Relinquished by: (Signature) [signature] 4/30/13 1915 — Received By: [signature] — Date & Time 4/30/13 1915

MA 4/30

Chain of Custody and Cooler Receipt Form for 1308753 Page 3 of 6



Chain of Custody and Cooler Receipt Form for 1308753 Page 4 of 6

BC LABORATORIES INC.

Submission #: 1308753

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐ BC Lab Field Service ☑ Other ☐ (Specify)________	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)________

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

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

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

COC Received		
☑ YES ☐ NO	Emissivity 0.95 Container Qt pe Thermometer ID 207 Temperature: (A) 0.5 °C / (C) 0.4 °C	Date/Time 4/30/13 1940 Analyst Init MA

SAMPLE CONTAINERS	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL / GENERAL PHYSICAL	B	B	B							
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C	C	C							
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER		D								
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										

MA 4/30/13 @ 2300

Chain of Custody and Cooler Receipt Form for 1308753 Page 5 of 6

Submission #: 1308753

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

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

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

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

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

COC Received ☐YES ☐ NO

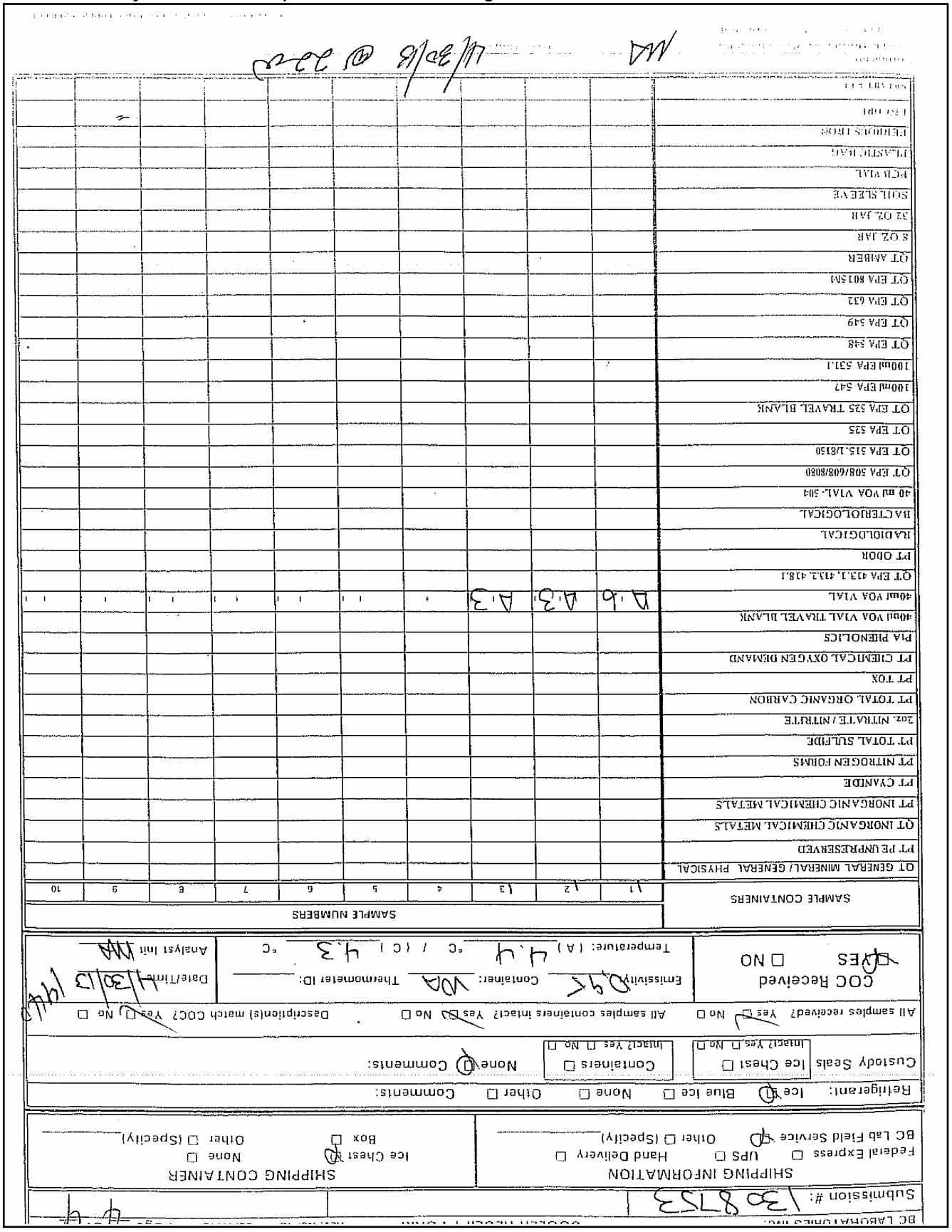
Emissivity: 0.95 Container: VOA Thermometer ID: _____ Temperature: (A) 4.4 °C / (C) 4.3 °C

Date/Time: 4/30/13 1445 Analyst Init: MA

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A(1)	A,3	A,3	A,6	A,3	A,3	A,3	A,3	A,3	A,3
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SULFAT. KIT										

Comments: MA 4/30/13 @ 2252

Chain of Custody and Cooler Receipt Form for 1308753 Page 6 of 6



Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1308753-01	**COC Number:**	---	**Receive Date:** 04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 04/30/2013 07:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	TB-7-43013	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): TB-7-43013
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308753-02	**COC Number:**	---	**Receive Date:** 04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 04/30/2013 07:10
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	EB-7-43013	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): EB-7-43013
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308753-03	**COC Number:**	---	**Receive Date:** 04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 04/30/2013 07:45
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-12-5	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-12-5
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1308753-04	**COC Number:**	---	**Receive Date:** 04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 04/30/2013 08:20
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-12-4	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-12-4
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308753-05	**COC Number:**	---	**Receive Date:** 04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 04/30/2013 09:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-12-3	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-12-3
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308753-06	**COC Number:**	---	**Receive Date:** 04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 04/30/2013 09:35
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-12-2	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-12-2
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308753-07	**COC Number:**	---	**Receive Date:**	04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/30/2013 10:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-12-1	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-12-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308753-08	**COC Number:**	---	**Receive Date:**	04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/30/2013 12:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-24-5	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-24-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308753-09	**COC Number:**	---	**Receive Date:**	04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:**	04/30/2013 12:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-24-4	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-24-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1308753-10	**COC Number:**	---	**Receive Date:** 04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 04/30/2013 13:10
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-24-3	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-24-3
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308753-11	**COC Number:**	---	**Receive Date:** 04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 04/30/2013 13:45
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-24-2	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-24-2
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308753-12	**COC Number:**	---	**Receive Date:** 04/30/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 04/30/2013 14:20
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-24-1	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Water
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-24-1
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1308753-13

COC Number: ---
Project Number: JPL-GW
Sampling Location: ---
Sampling Point: DUP-4-2Q13
Sampled By: Andy Wolff of BAT

Receive Date: 04/30/2013 19:15
Sampling Date: 04/30/2013 09:40
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Delivery Work Order:
Global ID: 0000000000
Location ID (FieldPoint): DUP-4-2Q13
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-01 | **Client Sample Name:** JPL-GW, TB-7-43013, 4/30/2013 7:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-01 | **Client Sample Name:** JPL-GW, TB-7-43013, 4/30/2013 7:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-01 | **Client Sample Name:** JPL-GW, TB-7-43013, 4/30/2013 7:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	86.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 21:03	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-01 | **Client Sample Name:** JPL-GW, TB-7-43013, 4/30/2013 7:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 21:03	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-02 | **Client Sample Name:** JPL-GW, EB-7-43013, 4/30/2013 7:10:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-02 | **Client Sample Name:** JPL-GW, EB-7-43013, 4/30/2013 7:10:00AM, Andy Wolff

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

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505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-02 | **Client Sample Name:** JPL-GW, EB-7-43013, 4/30/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	87.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 21:26	MGC	MS-V5	1	BWE0042

Battelle MHTS
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-02 | **Client Sample Name:** JPL-GW, EB-7-43013, 4/30/2013 7:10:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 21:26	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-02 | **Client Sample Name:** JPL-GW, EB-7-43013, 4/30/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**0.018**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND	**J**	1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	ND	mg/L	0.50	0.17	EPA-200.7	ND		1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	ND		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.24**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND	**J**	3
Nitrate as N	ND	mg/L	0.10	0.025	EPA-300.0	ND		3
Sulfate	**0.28**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND	**J**	3
pH	**5.74**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/09/13 15:18	JRG	PE-OP2	1	BWE0738
2	SM-2320B	05/03/13	05/03/13 15:33	FRP	MET-1	1	BWE0334
3	EPA-300.0	04/30/13	05/01/13 00:23	LD1	IC1	1	BWE0016
4	EPA-150.1	05/03/13	05/03/13 15:33	FRP	MET-1	1	BWE0334
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	0.667	BWE0007
6	EPA-353.2	05/01/13	05/01/13 09:25	TDC	KONE-1	1	BWE0196
7	EPA-314.0	05/09/13	05/09/13 17:22	LS1	IC6	1	BWE0850

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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-02 | **Client Sample Name:** JPL-GW, EB-7-43013, 4/30/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**8.0**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 23:09	LS1	KONE-1	1	BWE0171
2	EPA-200.8	05/09/13	05/09/13 18:01	SRM	PE-EL1	1	BWE0743
3	EPA-200.7	05/09/13	05/09/13 15:18	JRG	PE-OP2	1	BWE0738

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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-03 | **Client Sample Name:** JPL-GW, MW-12-5, 4/30/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.23**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND	**J**	1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-03 | **Client Sample Name:** JPL-GW, MW-12-5, 4/30/2013 7:45:00AM, Andy Wolff

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

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505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-03 | **Client Sample Name:** JPL-GW, MW-12-5, 4/30/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	88.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 21:48	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-03 | **Client Sample Name:** JPL-GW, MW-12-5, 4/30/2013 7:45:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 21:48	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-03 | **Client Sample Name:** JPL-GW, MW-12-5, 4/30/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**40**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**11**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**40**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**17**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**2.1**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**18**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.11**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**250**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**1.9**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/09/13 15:21	JRG	PE-OP2	1	BWE0738
2	SM-2320B	05/03/13	05/03/13 15:39	FRP	MET-1	1	BWE0334
3	EPA-300.0	04/30/13	05/01/13 00:37	LD1	IC1	1	BWE0016
4	EPA-150.1	05/03/13	05/03/13 15:39	FRP	MET-1	1	BWE0334
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	2	BWE0007
6	EPA-353.2	05/01/13	05/01/13 09:25	TDC	KONE-1	1	BWE0196
7	EPA-314.0	05/09/13	05/09/13 17:34	LS1	IC6	1	BWE0850

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-03 | **Client Sample Name:** JPL-GW, MW-12-5, 4/30/2013 7:45:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0023**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	**2.2**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**1.8**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**27**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 23:28	LS1	KONE-1	1	BWE0171
2	EPA-200.8	05/09/13	05/09/13 18:04	SRM	PE-EL1	1	BWE0743
3	EPA-200.7	05/09/13	05/09/13 15:21	JRG	PE-OP2	1	BWE0738

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-04 | **Client Sample Name:** JPL-GW, MW-12-4, 4/30/2013 8:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**0.25**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND	**J**	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.64**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-04 | **Client Sample Name:** JPL-GW, MW-12-4, 4/30/2013 8:20:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-04 | **Client Sample Name:** JPL-GW, MW-12-4, 4/30/2013 8:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	106	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	86.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 17:17	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-04 | **Client Sample Name:** JPL-GW, MW-12-4, 4/30/2013 8:20:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 17:17	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-04 | **Client Sample Name:** JPL-GW, MW-12-4, 4/30/2013 8:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**62**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**15**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**24**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**15**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**1.4**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**33**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.11**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**300**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.6**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/09/13 14:56	JRG	PE-OP2	1	BWE0738
2	SM-2320B	05/03/13	05/03/13 15:44	FRP	MET-1	1	BWE0334
3	EPA-300.0	04/30/13	04/30/13 23:29	LS1	IC1	1	BWE0016
4	EPA-150.1	05/03/13	05/03/13 15:44	FRP	MET-1	1	BWE0334
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	2	BWE0007
6	EPA-353.2	05/01/13	05/01/13 09:24	TDC	KONE-1	1	BWE0196
7	EPA-314.0	05/09/13	05/09/13 18:11	LS1	IC6	1	BWE0850

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-04 | **Client Sample Name:** JPL-GW, MW-12-4, 4/30/2013 8:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0013**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**1.7**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.83**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**17**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 23:09	LS1	KONE-1	1	BWE0171
2	EPA-200.8	05/09/13	05/09/13 17:27	SRM	PE-EL1	1	BWE0743
3	EPA-200.7	05/09/13	05/09/13 14:56	JRG	PE-OP2	1	BWE0738

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-05 | **Client Sample Name:** JPL-GW, MW-12-3, 4/30/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**0.52**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**1.0**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-05 | **Client Sample Name:** JPL-GW, MW-12-3, 4/30/2013 9:00:00AM, Andy Wolff

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

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505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-05 | **Client Sample Name:** JPL-GW, MW-12-3, 4/30/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	87.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 22:11	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-05 | **Client Sample Name:** JPL-GW, MW-12-3, 4/30/2013 9:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 22:11	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-05 | **Client Sample Name:** JPL-GW, MW-12-3, 4/30/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**45**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**14**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**24**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**15**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	ND	mg/L	0.10	0.025	EPA-300.0	ND		3
Sulfate	**28**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.17**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**240**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/09/13 15:23	JRG	PE-OP2	1	BWE0738
2	SM-2320B	05/03/13	05/03/13 16:06	FRP	MET-1	1	BWE0335
3	EPA-300.0	04/30/13	05/01/13 00:50	LD1	IC1	1	BWE0016
4	EPA-150.1	05/03/13	05/03/13 16:06	FRP	MET-1	1	BWE0335
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	2	BWE0007
6	EPA-353.2	05/01/13	05/01/13 09:25	TDC	KONE-1	1	BWE0196
7	EPA-314.0	05/09/13	05/09/13 18:24	LS1	IC6	1	BWE0850

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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-05 | **Client Sample Name:** JPL-GW, MW-12-3, 4/30/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.3**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**71**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 23:09	LS1	KONE-1	1	BWE0171
2	EPA-200.8	05/09/13	05/09/13 18:07	SRM	PE-EL1	1	BWE0743
3	EPA-200.7	05/09/13	05/09/13 15:23	JRG	PE-OP2	1	BWE0738

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-06 | **Client Sample Name:** JPL-GW, MW-12-2, 4/30/2013 9:35:00AM, Andy Wolff

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

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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-06 | **Client Sample Name:** JPL-GW, MW-12-2, 4/30/2013 9:35:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-06 | **Client Sample Name:** JPL-GW, MW-12-2, 4/30/2013 9:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	87.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 22:33	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-06 | **Client Sample Name:** JPL-GW, MW-12-2, 4/30/2013 9:35:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 22:33	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-06 | **Client Sample Name:** JPL-GW, MW-12-2, 4/30/2013 9:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**62**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**20**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**24**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**19**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**2.0**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**49**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.89**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**330**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**8.5**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/09/13 15:26	JRG	PE-OP2	1	BWE0738
2	SM-2320B	05/03/13	05/03/13 16:17	FRP	MET-1	1	BWE0335
3	EPA-300.0	04/30/13	05/01/13 01:04	LD1	IC1	1	BWE0016
4	EPA-150.1	05/03/13	05/03/13 16:17	FRP	MET-1	1	BWE0335
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	2	BWE0007
6	EPA-353.2	05/01/13	05/01/13 09:27	TDC	KONE-1	1	BWE0196
7	EPA-314.0	05/09/13	05/09/13 18:36	LS1	IC6	1	BWE0851

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-06 | **Client Sample Name:** JPL-GW, MW-12-2, 4/30/2013 9:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**0.75**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**160**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 23:09	LS1	KONE-1	1	BWE0171
2	EPA-200.8	05/09/13	05/09/13 18:10	SRM	PE-EL1	1	BWE0743
3	EPA-200.7	05/09/13	05/09/13 15:26	JRG	PE-OP2	1	BWE0738

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-07 | **Client Sample Name:** JPL-GW, MW-12-1, 4/30/2013 10:50:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-07 | **Client Sample Name:** JPL-GW, MW-12-1, 4/30/2013 10:50:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-07 | **Client Sample Name:** JPL-GW, MW-12-1, 4/30/2013 10:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	87.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 22:56	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-07 | **Client Sample Name:** JPL-GW, MW-12-1, 4/30/2013 10:50:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 22:56	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-07 | **Client Sample Name:** JPL-GW, MW-12-1, 4/30/2013 10:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**51**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**17**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**23**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**11**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**0.24**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**23**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.84**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**250**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/10/13 20:20	JRG	PE-OP2	1	BWE0741
2	SM-2320B	05/03/13	05/03/13 16:23	FRP	MET-1	1	BWE0335
3	EPA-300.0	04/30/13	05/01/13 01:44	LD1	IC1	1	BWE0016
4	EPA-150.1	05/03/13	05/03/13 16:23	FRP	MET-1	1	BWE0335
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	2	BWE0007
6	EPA-353.2	05/01/13	05/01/13 09:27	TDC	KONE-1	1	BWE0196
7	EPA-314.0	05/09/13	05/09/13 18:48	LS1	IC6	1	BWE0851

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-07 | **Client Sample Name:** JPL-GW, MW-12-1, 4/30/2013 10:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**0.61**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**1800**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 23:45	LS1	KONE-1	1	BWE0171
2	EPA-200.8	05/09/13	05/09/13 18:13	SRM	PE-EL1	1	BWE0743
3	EPA-200.7	05/09/13	05/10/13 20:20	JRG	PE-OP2	1	BWE0741

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-08 | **Client Sample Name:** JPL-GW, MW-24-5, 4/30/2013 12:05:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-08 | **Client Sample Name:** JPL-GW, MW-24-5, 4/30/2013 12:05:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-08 | **Client Sample Name:** JPL-GW, MW-24-5, 4/30/2013 12:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	86.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 23:18	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-08 | **Client Sample Name:** JPL-GW, MW-24-5, 4/30/2013 12:05:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 23:18	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-08 | **Client Sample Name:** JPL-GW, MW-24-5, 4/30/2013 12:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**32**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**9.9**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**41**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.9**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**8.4**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**1.1**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**19**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.27**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**220**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/10/13 20:27	JRG	PE-OP2	1	BWE0741
2	SM-2320B	05/03/13	05/03/13 16:30	FRP	MET-1	1	BWE0335
3	EPA-300.0	04/30/13	05/01/13 01:58	LD1	IC1	1	BWE0016
4	EPA-150.1	05/03/13	05/03/13 16:30	FRP	MET-1	1	BWE0335
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	2	BWE0007
6	EPA-353.2	05/01/13	05/01/13 09:27	TDC	KONE-1	1	BWE0196
7	EPA-314.0	05/09/13	05/09/13 19:01	LS1	IC6	1	BWE0851

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-08 | **Client Sample Name:** JPL-GW, MW-24-5, 4/30/2013 12:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0028**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	**2.4**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**2.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**57**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	**0.14**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 23:15	LS1	KONE-1	1	BWE0171
2	EPA-200.8	05/09/13	05/09/13 18:17	SRM	PE-EL1	1	BWE0743
3	EPA-200.7	05/09/13	05/10/13 20:27	JRG	PE-OP2	1	BWE0741

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-09 | **Client Sample Name:** JPL-GW, MW-24-4, 4/30/2013 12:40:00PM, Andy Wolff

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

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505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-09 | **Client Sample Name:** JPL-GW, MW-24-4, 4/30/2013 12:40:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-09 | **Client Sample Name:** JPL-GW, MW-24-4, 4/30/2013 12:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	88.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 23:41	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-09 | **Client Sample Name:** JPL-GW, MW-24-4, 4/30/2013 12:40:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/01/13 23:41	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-09 | **Client Sample Name:** JPL-GW, MW-24-4, 4/30/2013 12:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**5.5**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**6.3**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**34**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**80**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**13**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**87**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**20**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**0.13**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**1.8**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**9.17**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**130**	**mg/L**	**10**	**10**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/10/13 20:30	JRG	PE-OP2	1	BWE0741
2	SM-2320B	05/03/13	05/03/13 16:35	FRP	MET-1	1	BWE0335
3	EPA-300.0	04/30/13	05/01/13 02:11	LD1	IC1	1	BWE0016
4	EPA-150.1	05/03/13	05/03/13 16:35	FRP	MET-1	1	BWE0335
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	1	BWE0007
6	EPA-353.2	05/01/13	05/01/13 09:27	TDC	KONE-1	1	BWE0196
7	EPA-314.0	05/09/13	05/09/13 19:13	LS1	IC6	1	BWE0851

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-09 | **Client Sample Name:** JPL-GW, MW-24-4, 4/30/2013 12:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.1**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**25**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 23:15	LS1	KONE-1	1	BWE0171
2	EPA-200.8	05/09/13	05/09/13 18:20	SRM	PE-EL1	1	BWE0743
3	EPA-200.7	05/09/13	05/10/13 20:30	JRG	PE-OP2	1	BWE0741

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-10 | **Client Sample Name:** JPL-GW, MW-24-3, 4/30/2013 1:10:00PM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-10 | **Client Sample Name:** JPL-GW, MW-24-3, 4/30/2013 1:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.62**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-10 | **Client Sample Name:** JPL-GW, MW-24-3, 4/30/2013 1:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	86.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/02/13 00:03	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-10 | **Client Sample Name:** JPL-GW, MW-24-3, 4/30/2013 1:10:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/02/13 00:03	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-10 | **Client Sample Name:** JPL-GW, MW-24-3, 4/30/2013 1:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**30**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**13**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**47**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**28**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**0.094**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND	**J**	3
Sulfate	**16**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.31**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**250**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/10/13 20:32	JRG	PE-OP2	1	BWE0741
2	SM-2320B	05/03/13	05/03/13 16:41	FRP	MET-1	1	BWE0335
3	EPA-300.0	04/30/13	05/01/13 02:25	LD1	IC1	1	BWE0016
4	EPA-150.1	05/03/13	05/03/13 16:41	FRP	MET-1	1	BWE0335
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	2	BWE0007
6	EPA-353.2	05/01/13	05/01/13 09:18	TDC	KONE-1	1	BWE0195
7	EPA-314.0	05/09/13	05/09/13 19:25	LS1	IC6	1	BWE0851

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-10 | **Client Sample Name:** JPL-GW, MW-24-3, 4/30/2013 1:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0040	0.0014	EPA-7196	ND	A10	1
Total Recoverable Arsenic	**2.3**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**28**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/01/13	05/01/13 08:36	TDC	KONE-1	1	BWE0192
2	EPA-200.8	05/09/13	05/09/13 20:14	SRM	PE-EL1	1	BWE0746
3	EPA-200.7	05/09/13	05/10/13 20:32	JRG	PE-OP2	1	BWE0741

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-11 | **Client Sample Name:** JPL-GW, MW-24-2, 4/30/2013 1:45:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**0.51**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**0.60**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**1.1**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.31**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-11 | **Client Sample Name:** JPL-GW, MW-24-2, 4/30/2013 1:45:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.38**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.23**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-11 | **Client Sample Name:** JPL-GW, MW-24-2, 4/30/2013 1:45:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	87.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/02/13 01:33	MGC	MS-V5	1	BWE0043

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-11 | **Client Sample Name:** JPL-GW, MW-24-2, 4/30/2013 1:45:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/02/13 01:33	MGC	MS-V5	1	BWE0043

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-11 | **Client Sample Name:** JPL-GW, MW-24-2, 4/30/2013 1:45:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**43**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**15**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**41**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**48**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**1.8**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**25**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.84**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**320**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**11**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/10/13 20:03	JRG	PE-OP2	1	BWE0741
2	SM-2320B	05/03/13	05/03/13 16:47	FRP	MET-1	1	BWE0335
3	EPA-300.0	04/30/13	05/01/13 03:06	LD1	IC1	1	BWE0017
4	EPA-150.1	05/03/13	05/03/13 16:47	FRP	MET-1	1	BWE0335
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	2	BWE0008
6	EPA-353.2	05/01/13	05/01/13 09:31	TDC	KONE-1	1	BWE0195
7	EPA-314.0	05/09/13	05/09/13 19:37	LS1	IC6	1	BWE0851

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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-11 | **Client Sample Name:** JPL-GW, MW-24-2, 4/30/2013 1:45:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0025**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	**2.4**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**1.8**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**51**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/01/13	05/01/13 08:36	TDC	KONE-1	1	BWE0192
2	EPA-200.8	05/09/13	05/09/13 18:40	SRM	PE-EL1	1	BWE0746
3	EPA-200.7	05/09/13	05/10/13 20:03	JRG	PE-OP2	1	BWE0741

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-12 | **Client Sample Name:** JPL-GW, MW-24-1, 4/30/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**0.87**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND		1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**4.3**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-12 | **Client Sample Name:** JPL-GW, MW-24-1, 4/30/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	**0.44**	**ug/L**	**1.0**	**0.38**	**EPA-524.2**	ND	**J**	1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-12 | **Client Sample Name:** JPL-GW, MW-24-1, 4/30/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	88.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/02/13 00:26	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-12 | **Client Sample Name:** JPL-GW, MW-24-1, 4/30/2013 2:20:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/02/13 00:26	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

BCL Sample ID: 1308753-12 | **Client Sample Name:** JPL-GW, MW-24-1, 4/30/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,4-Dioxane	ND	ug/L	1.0	0.38	EPA-8270C	ND		1
Naphthalene-d8 (Surrogate)	114	%	75 - 132 (LCL - UCL)		EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	05/02/13	05/11/13 03:20	RDS	MS-B4	0.990	BWE0554

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-12 | **Client Sample Name:** JPL-GW, MW-24-1, 4/30/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**67**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**22**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**36**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**220**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**68**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**1.2**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**40**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.45**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**370**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7
ortho-Phosphate as P	**0.027**	**mg/L**	**0.020**	**0.0038**	**EPA-365.1**	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/10/13 20:35	JRG	PE-OP2	1	BWE0741
2	SM-2320B	05/03/13	05/03/13 16:52	FRP	MET-1	1	BWE0335
3	EPA-300.0	04/30/13	05/01/13 04:27	LD1	IC1	1	BWE0017
4	EPA-150.1	05/03/13	05/03/13 16:52	FRP	MET-1	1	BWE0335
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	2	BWE0007
6	EPA-353.2	05/01/13	05/01/13 09:19	TDC	KONE-1	1	BWE0195
7	EPA-314.0	05/09/13	05/09/13 19:50	LS1	IC6	1	BWE0851
8	EPA-365.1	05/01/13	05/01/13 12:01	TDC	KONE-1	1	BWE0191

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-12 | **Client Sample Name:** JPL-GW, MW-24-1, 4/30/2013 2:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0025**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**20**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**150**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/01/13	05/01/13 08:36	TDC	KONE-1	1	BWE0192
2	EPA-200.8	05/09/13	05/09/13 20:17	SRM	PE-EL1	1	BWE0746
3	EPA-200.7	05/09/13	05/10/13 20:35	JRG	PE-OP2	1	BWE0741

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-13 | **Client Sample Name:** JPL-GW, DUP-4-2Q13, 4/30/2013 9:40:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-13 | **Client Sample Name:** JPL-GW, DUP-4-2Q13, 4/30/2013 9:40:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308753-13 | **Client Sample Name:** JPL-GW, DUP-4-2Q13, 4/30/2013 9:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND	V11	1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	86.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/02/13 00:48	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308753-13 | **Client Sample Name:** JPL-GW, DUP-4-2Q13, 4/30/2013 9:40:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/01/13	05/02/13 00:48	MGC	MS-V5	1	BWE0042

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308753-13 | **Client Sample Name:** JPL-GW, DUP-4-2Q13, 4/30/2013 9:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**65**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**21**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**26**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.4**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**19**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	ND		3
Nitrate as N	**2.5**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**49**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.63**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**350**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**8.7**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/09/13	05/10/13 20:37	JRG	PE-OP2	1	BWE0741
2	SM-2320B	05/03/13	05/03/13 16:59	FRP	MET-1	1	BWE0335
3	EPA-300.0	04/30/13	05/01/13 04:40	LD1	IC1	1	BWE0017
4	EPA-150.1	05/03/13	05/03/13 16:59	FRP	MET-1	1	BWE0335
5	EPA-160.1	05/01/13	05/01/13 07:50	NW1	MANUAL	2	BWE0008
6	EPA-353.2	05/01/13	05/01/13 09:24	TDC	KONE-1	1	BWE0196
7	EPA-314.0	05/09/13	05/09/13 20:02	LS1	IC6	1	BWE0851

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308753-13 | **Client Sample Name:** JPL-GW, DUP-4-2Q13, 4/30/2013 9:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**160**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	04/30/13	04/30/13 23:15	LS1	KONE-1	1	BWE0171
2	EPA-200.8	05/09/13	05/09/13 20:20	SRM	PE-EL1	1	BWE0746
3	EPA-200.7	05/09/13	05/10/13 20:37	JRG	PE-OP2	1	BWE0741

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0042						
Benzene	BWE0042-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWE0042-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWE0042-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWE0042-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWE0042-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWE0042-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWE0042-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWE0042-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWE0042-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWE0042-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWE0042-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWE0042-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWE0042-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWE0042-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWE0042-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWE0042-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BWE0042-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWE0042-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWE0042-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWE0042-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWE0042-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWE0042-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWE0042-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWE0042-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWE0042-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWE0042-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWE0042-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWE0042-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWE0042-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWE0042-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWE0042-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWE0042-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWE0042-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWE0042-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: BWE0042						
trans-1,3-Dichloropropene	BWE0042-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWE0042-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWE0042-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWE0042-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWE0042-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWE0042-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWE0042-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWE0042-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWE0042-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWE0042-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWE0042-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWE0042-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWE0042-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWE0042-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWE0042-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWE0042-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BWE0042-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWE0042-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWE0042-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWE0042-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWE0042-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWE0042-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWE0042-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWE0042-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWE0042-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWE0042-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWE0042-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWE0042-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWE0042-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWE0042-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWE0042-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWE0042-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWE0042-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWE0042-BLK1	ND	ug/L	4.0	0.97	

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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: BWE0042						
Ethyl t-butyl ether	BWE0042-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWE0042-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWE0042-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWE0042-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWE0042-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWE0042-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWE0042-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWE0042-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWE0042-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWE0042-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWE0042-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWE0042-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWE0042-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWE0042-BLK1	111	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWE0042-BLK1	103	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWE0042-BLK1	82.2	%	80 - 120 (LCL - UCL)		
QC Batch ID: BWE0043						
Benzene	BWE0043-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWE0043-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWE0043-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWE0043-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWE0043-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWE0043-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWE0043-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWE0043-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWE0043-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWE0043-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWE0043-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWE0043-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWE0043-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWE0043-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWE0043-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWE0043-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: BWE0043						
Dibromochloromethane	BWE0043-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWE0043-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWE0043-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWE0043-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWE0043-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWE0043-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWE0043-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWE0043-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWE0043-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWE0043-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWE0043-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWE0043-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWE0043-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWE0043-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWE0043-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWE0043-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWE0043-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWE0043-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	BWE0043-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWE0043-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWE0043-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWE0043-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWE0043-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWE0043-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWE0043-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWE0043-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWE0043-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWE0043-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWE0043-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWE0043-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWE0043-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWE0043-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWE0043-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWE0043-BLK1	ND	ug/L	0.50	0.19	

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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: BWE0043						
1,1,1-Trichloroethane	BWE0043-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWE0043-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWE0043-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWE0043-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWE0043-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWE0043-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWE0043-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWE0043-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWE0043-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWE0043-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWE0043-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWE0043-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWE0043-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWE0043-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWE0043-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWE0043-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWE0043-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWE0043-BLK1	ND	ug/L	4.0	0.97	
Ethyl t-butyl ether	BWE0043-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWE0043-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWE0043-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWE0043-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWE0043-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWE0043-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWE0043-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWE0043-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWE0043-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWE0043-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWE0043-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWE0043-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWE0043-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWE0043-BLK1	109	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWE0043-BLK1	103	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWE0043-BLK1	85.4	%	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: BWE0042										
Benzene	BWE0042-BS1	LCS	27.770	25.000	ug/L	111		70 - 130		
Bromodichloromethane	BWE0042-BS1	LCS	27.520	25.000	ug/L	110		70 - 130		
Chlorobenzene	BWE0042-BS1	LCS	24.730	25.000	ug/L	98.9		70 - 130		
Chloroethane	BWE0042-BS1	LCS	29.070	25.000	ug/L	116		70 - 130		
1,4-Dichlorobenzene	BWE0042-BS1	LCS	26.830	25.000	ug/L	107		70 - 130		
1,1-Dichloroethane	BWE0042-BS1	LCS	26.400	25.000	ug/L	106		70 - 130		
1,1-Dichloroethene	BWE0042-BS1	LCS	27.060	25.000	ug/L	108		70 - 130		
Toluene	BWE0042-BS1	LCS	27.160	25.000	ug/L	109		70 - 130		
Trichloroethene	BWE0042-BS1	LCS	26.930	25.000	ug/L	108		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWE0042-BS1	LCS	11.030	10.000	ug/L	110		75 - 125		
Toluene-d8 (Surrogate)	BWE0042-BS1	LCS	10.630	10.000	ug/L	106		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWE0042-BS1	LCS	10.240	10.000	ug/L	102		80 - 120		
QC Batch ID: BWE0043										
Benzene	BWE0043-BS1	LCS	28.010	25.000	ug/L	112		70 - 130		
Bromodichloromethane	BWE0043-BS1	LCS	27.610	25.000	ug/L	110		70 - 130		
Chlorobenzene	BWE0043-BS1	LCS	25.000	25.000	ug/L	100		70 - 130		
Chloroethane	BWE0043-BS1	LCS	29.280	25.000	ug/L	117		70 - 130		
1,4-Dichlorobenzene	BWE0043-BS1	LCS	26.520	25.000	ug/L	106		70 - 130		
1,1-Dichloroethane	BWE0043-BS1	LCS	26.510	25.000	ug/L	106		70 - 130		
1,1-Dichloroethene	BWE0043-BS1	LCS	27.100	25.000	ug/L	108		70 - 130		
Toluene	BWE0043-BS1	LCS	26.690	25.000	ug/L	107		70 - 130		
Trichloroethene	BWE0043-BS1	LCS	29.160	25.000	ug/L	117		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWE0043-BS1	LCS	10.710	10.000	ug/L	107		75 - 125		
Toluene-d8 (Surrogate)	BWE0043-BS1	LCS	10.590	10.000	ug/L	106		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWE0043-BS1	LCS	10.040	10.000	ug/L	100		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: BWE0042	Used client sample: Y - Description: MW-12-4, 04/30/2013 08:20										
Benzene	MS	1308753-04	ND	28.780	25.000	ug/L		115		70 - 130	
	MSD	1308753-04	ND	26.680	25.000	ug/L	7.6	107	20	70 - 130	
Bromodichloromethane	MS	1308753-04	ND	28.410	25.000	ug/L		114		70 - 130	
	MSD	1308753-04	ND	27.730	25.000	ug/L	2.4	111	20	70 - 130	
Chlorobenzene	MS	1308753-04	ND	26.110	25.000	ug/L		104		70 - 130	
	MSD	1308753-04	ND	24.740	25.000	ug/L	5.4	99.0	20	70 - 130	
Chloroethane	MS	1308753-04	ND	29.790	25.000	ug/L		119		70 - 130	
	MSD	1308753-04	ND	28.230	25.000	ug/L	5.4	113	20	70 - 130	
1,4-Dichlorobenzene	MS	1308753-04	ND	28.320	25.000	ug/L		113		70 - 130	
	MSD	1308753-04	ND	26.750	25.000	ug/L	5.7	107	20	70 - 130	
1,1-Dichloroethane	MS	1308753-04	ND	27.260	25.000	ug/L		109		70 - 130	
	MSD	1308753-04	ND	25.640	25.000	ug/L	6.1	103	20	70 - 130	
1,1-Dichloroethene	MS	1308753-04	ND	28.200	25.000	ug/L		113		70 - 130	
	MSD	1308753-04	ND	26.190	25.000	ug/L	7.4	105	20	70 - 130	
Toluene	MS	1308753-04	ND	27.460	25.000	ug/L		110		70 - 130	
	MSD	1308753-04	ND	26.530	25.000	ug/L	3.4	106	20	70 - 130	
Trichloroethene	MS	1308753-04	0.18000	26.300	25.000	ug/L		104		70 - 130	
	MSD	1308753-04	0.18000	25.850	25.000	ug/L	1.7	103	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1308753-04	ND	10.810	10.000	ug/L		108		75 - 125	
	MSD	1308753-04	ND	10.520	10.000	ug/L	2.7	105		75 - 125	
Toluene-d8 (Surrogate)	MS	1308753-04	ND	10.370	10.000	ug/L		104		80 - 120	
	MSD	1308753-04	ND	10.460	10.000	ug/L	0.9	105		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1308753-04	ND	10.350	10.000	ug/L		104		80 - 120	
	MSD	1308753-04	ND	10.160	10.000	ug/L	1.9	102		80 - 120	
QC Batch ID: BWE0043	Used client sample: Y - Description: MW-24-2, 04/30/2013 13:45										
Benzene	MS	1308753-11	ND	27.410	25.000	ug/L		110		70 - 130	
	MSD	1308753-11	ND	27.900	25.000	ug/L	1.8	112	20	70 - 130	
Bromodichloromethane	MS	1308753-11	0.51000	27.920	25.000	ug/L		110		70 - 130	
	MSD	1308753-11	0.51000	28.430	25.000	ug/L	1.8	112	20	70 - 130	
Chlorobenzene	MS	1308753-11	ND	25.170	25.000	ug/L		101		70 - 130	
	MSD	1308753-11	ND	26.130	25.000	ug/L	3.7	105	20	70 - 130	
Chloroethane	MS	1308753-11	ND	28.750	25.000	ug/L		115		70 - 130	
	MSD	1308753-11	ND	29.630	25.000	ug/L	3.0	119	20	70 - 130	
1,4-Dichlorobenzene	MS	1308753-11	ND	26.930	25.000	ug/L		108		70 - 130	
	MSD	1308753-11	ND	27.360	25.000	ug/L	1.6	109	20	70 - 130	
1,1-Dichloroethane	MS	1308753-11	0.31000	26.120	25.000	ug/L		103		70 - 130	
	MSD	1308753-11	0.31000	26.930	25.000	ug/L	3.1	106	20	70 - 130	

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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: BWE0043	Used client sample: Y - Description: MW-24-2, 04/30/2013 13:45										
1,1-Dichloroethene	MS	1308753-11	ND	26.570	25.000	ug/L		106		70 - 130	
	MSD	1308753-11	ND	27.280	25.000	ug/L	2.6	109	20	70 - 130	
Toluene	MS	1308753-11	ND	26.730	25.000	ug/L		107		70 - 130	
	MSD	1308753-11	ND	26.820	25.000	ug/L	0.3	107	20	70 - 130	
Trichloroethene	MS	1308753-11	0.23000	25.340	25.000	ug/L		100		70 - 130	
	MSD	1308753-11	0.23000	25.680	25.000	ug/L	1.3	102	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1308753-11	ND	10.610	10.000	ug/L		106		75 - 125	
	MSD	1308753-11	ND	10.650	10.000	ug/L	0.4	106		75 - 125	
Toluene-d8 (Surrogate)	MS	1308753-11	ND	10.480	10.000	ug/L		105		80 - 120	
	MSD	1308753-11	ND	10.400	10.000	ug/L	0.8	104		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1308753-11	ND	10.170	10.000	ug/L		102		80 - 120	
	MSD	1308753-11	ND	10.230	10.000	ug/L	0.6	102		80 - 120	

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0042						
Chloroacetonitrile	BWE0042-BLK1	0	ug/L			
1-Chlorobutane	BWE0042-BLK1	0	ug/L			
1,1-Dichloropropanone	BWE0042-BLK1	0	ug/L			
Methyl acrylate	BWE0042-BLK1	0	ug/L			
Nitrobenzene	BWE0042-BLK1	0	ug/L			
2-Nitropropane	BWE0042-BLK1	0	ug/L			
QC Batch ID: BWE0043						
Chloroacetonitrile	BWE0043-BLK1	0	ug/L			
1-Chlorobutane	BWE0043-BLK1	0	ug/L			
1,1-Dichloropropanone	BWE0043-BLK1	0	ug/L			
Methyl acrylate	BWE0043-BLK1	0	ug/L			
Nitrobenzene	BWE0043-BLK1	0	ug/L			
2-Nitropropane	BWE0043-BLK1	0	ug/L			

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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0554						
1,4-Dioxane	BWE0554-BLK1	ND	ug/L	1.0	0.38	
Naphthalene-d8 (Surrogate)	BWE0554-BLK1	97.9	%	75 - 132 (LCL - UCL)		

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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BWE0554										
1,4-Dioxane	BWE0554-BS1	LCS	52.270	50.000	ug/L	105		70 - 130		
Naphthalene-d8 (Surrogate)	BWE0554-BS1	LCS	42.100	40.000	ug/L	105		75 - 132		

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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BWE0554	Used client sample: N										
1,4-Dioxane	MS	1308130-42	ND	51.730	50.000	ug/L		103		70 - 130	
	MSD	1308130-42	ND	53.970	50.000	ug/L	4.2	108	30	70 - 130	
Naphthalene-d8 (Surrogate)	MS	1308130-42	ND	52.670	40.000	ug/L		132		75 - 132	
	MSD	1308130-42	ND	46.730	40.000	ug/L	12.0	117		75 - 132	

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0007						
Total Dissolved Solids @ 180 C	BWE0007-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWE0008						
Total Dissolved Solids @ 180 C	BWE0008-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWE0016						
Chloride	BWE0016-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	BWE0016-BLK1	ND	mg/L	0.10	0.025	
Sulfate	BWE0016-BLK1	ND	mg/L	1.0	0.18	
QC Batch ID: BWE0017						
Chloride	BWE0017-BLK1	ND	mg/L	0.50	0.067	
Nitrate as N	BWE0017-BLK1	ND	mg/L	0.10	0.025	
Sulfate	BWE0017-BLK1	ND	mg/L	1.0	0.18	
QC Batch ID: BWE0191						
ortho-Phosphate as P	BWE0191-BLK1	ND	mg/L	0.020	0.0038	
QC Batch ID: BWE0195						
Nitrite as N	BWE0195-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWE0196						
Nitrite as N	BWE0196-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWE0334						
Bicarbonate	BWE0334-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0334-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0334-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0335						
Bicarbonate	BWE0335-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0335-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0335-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0738						
Total Recoverable Calcium	BWE0738-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0738-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0738-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0738-BLK1	ND	mg/L	1.0	0.10	

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0741						
Total Recoverable Calcium	BWE0741-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0741-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0741-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0741-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWE0850						
Perchlorate	BWE0850-BLK1	ND	ug/L	4.0	0.81	
QC Batch ID: BWE0851						
Perchlorate	BWE0851-BLK1	ND	ug/L	4.0	0.81	

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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: BWE0007										
Total Dissolved Solids @ 180 C	BWE0007-BS1	LCS	555.00	586.00	mg/L	94.7		90 - 110		
QC Batch ID: BWE0008										
Total Dissolved Solids @ 180 C	BWE0008-BS1	LCS	565.00	586.00	mg/L	96.4		90 - 110		
QC Batch ID: BWE0016										
Chloride	BWE0016-BS1	LCS	50.491	50.000	mg/L	101		90 - 110		
Nitrate as N	BWE0016-BS1	LCS	5.0440	5.0000	mg/L	101		90 - 110		
Sulfate	BWE0016-BS1	LCS	100.77	100.00	mg/L	101		90 - 110		
QC Batch ID: BWE0017										
Chloride	BWE0017-BS1	LCS	50.438	50.000	mg/L	101		90 - 110		
Nitrate as N	BWE0017-BS1	LCS	4.9890	5.0000	mg/L	99.8		90 - 110		
Sulfate	BWE0017-BS1	LCS	100.18	100.00	mg/L	100		90 - 110		
QC Batch ID: BWE0191										
ortho-Phosphate as P	BWE0191-BS1	LCS	0.20586	0.20000	mg/L	103		90 - 110		
QC Batch ID: BWE0195										
Nitrite as N	BWE0195-BS1	LCS	0.49173	0.50000	mg/L	98.3		90 - 110		
QC Batch ID: BWE0196										
Nitrite as N	BWE0196-BS1	LCS	0.48230	0.50000	mg/L	96.5		90 - 110		
QC Batch ID: BWE0334										
Total Alkalinity as CaCO3	BWE0334-BS3	LCS	99.800	100.00	mg/L	99.8		90 - 110		
pH	BWE0334-BS2	LCS	7.0400	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0335										
Total Alkalinity as CaCO3	BWE0335-BS3	LCS	98.580	100.00	mg/L	98.6		90 - 110		
pH	BWE0335-BS2	LCS	6.9700	7.0000	pH Units	99.6		95 - 105		
QC Batch ID: BWE0738										
Total Recoverable Calcium	BWE0738-BS1	LCS	10.201	10.000	mg/L	102		85 - 115		
Total Recoverable Magnesium	BWE0738-BS1	LCS	10.416	10.000	mg/L	104		85 - 115		
Total Recoverable Sodium	BWE0738-BS1	LCS	9.8132	10.000	mg/L	98.1		85 - 115		
Total Recoverable Potassium	BWE0738-BS1	LCS	9.6505	10.000	mg/L	96.5		85 - 115		
QC Batch ID: BWE0741										
Total Recoverable Calcium	BWE0741-BS1	LCS	10.005	10.000	mg/L	100		85 - 115		
Total Recoverable Magnesium	BWE0741-BS1	LCS	10.199	10.000	mg/L	102		85 - 115		
Total Recoverable Sodium	BWE0741-BS1	LCS	9.7352	10.000	mg/L	97.4		85 - 115		

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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: BWE0741										
Total Recoverable Potassium	BWE0741-BS1	LCS	9.5583	10.000	mg/L	95.6		85 - 115		
QC Batch ID: BWE0850										
Perchlorate	BWE0850-BS1	LCS	10.135	10.000	ug/L	101		85 - 115		
QC Batch ID: BWE0851										
Perchlorate	BWE0851-BS1	LCS	9.9396	10.000	ug/L	99.4		85 - 115		

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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: BWE0007	Used client sample: Y - Description: MW-12-4, 04/30/2013 08:20										
Total Dissolved Solids @ 180 C	DUP	1308753-04	296.00	298.00		mg/L	0.7		10		
QC Batch ID: BWE0008	Used client sample: Y - Description: MW-24-2, 04/30/2013 13:45										
Total Dissolved Solids @ 180 C	DUP	1308753-11	322.00	320.00		mg/L	0.6		10		
QC Batch ID: BWE0016	Used client sample: Y - Description: MW-12-4, 04/30/2013 08:20										
Chloride	DUP	1308753-04	14.711	14.684		mg/L	0.2		10		
	MS	1308753-04	14.711	66.938	50.505	mg/L		103		80 - 120	
	MSD	1308753-04	14.711	66.876	50.505	mg/L	0.1	103	10	80 - 120	
Nitrate as N	DUP	1308753-04	1.3520	1.3410		mg/L	0.8		10		
	MS	1308753-04	1.3520	6.4707	5.0505	mg/L		101		80 - 120	
	MSD	1308753-04	1.3520	6.4313	5.0505	mg/L	0.6	101	10	80 - 120	
Sulfate	DUP	1308753-04	32.708	32.572		mg/L	0.4		10		
	MS	1308753-04	32.708	135.68	101.01	mg/L		102		80 - 120	
	MSD	1308753-04	32.708	135.46	101.01	mg/L	0.2	102	10	80 - 120	
QC Batch ID: BWE0017	Used client sample: Y - Description: MW-24-2, 04/30/2013 13:45										
Chloride	DUP	1308753-11	47.557	47.550		mg/L	0.0		10		
	MS	1308753-11	47.557	102.05	50.505	mg/L		108		80 - 120	
	MSD	1308753-11	47.557	102.31	50.505	mg/L	0.3	108	10	80 - 120	
Nitrate as N	DUP	1308753-11	1.7940	1.7530		mg/L	2.3		10		
	MS	1308753-11	1.7940	7.0808	5.0505	mg/L		105		80 - 120	
	MSD	1308753-11	1.7940	7.1606	5.0505	mg/L	1.1	106	10	80 - 120	
Sulfate	DUP	1308753-11	25.151	25.124		mg/L	0.1		10		
	MS	1308753-11	25.151	132.41	101.01	mg/L		106		80 - 120	
	MSD	1308753-11	25.151	132.70	101.01	mg/L	0.2	106	10	80 - 120	
QC Batch ID: BWE0191	Used client sample: Y - Description: MW-24-1, 04/30/2013 14:20										
ortho-Phosphate as P	DUP	1308753-12	0.026921	0.029186		mg/L	8.1		10		
	MS	1308753-12	0.026921	0.22771	0.21053	mg/L		95.4		90 - 110	
	MSD	1308753-12	0.026921	0.23032	0.21053	mg/L	1.1	96.6	10	90 - 110	
QC Batch ID: BWE0195	Used client sample: Y - Description: MW-24-2, 04/30/2013 13:45										
Nitrite as N	DUP	1308753-11	ND	ND		mg/L			10		
	MS	1308753-11	ND	0.51481	0.52632	mg/L		97.8		90 - 110	
	MSD	1308753-11	ND	0.52426	0.52632	mg/L	1.8	99.6	10	90 - 110	
QC Batch ID: BWE0196	Used client sample: Y - Description: MW-12-4, 04/30/2013 08:20										
Nitrite as N	DUP	1308753-04	ND	ND		mg/L			10		
	MS	1308753-04	ND	0.52642	0.52632	mg/L		100		90 - 110	
	MSD	1308753-04	ND	0.52919	0.52632	mg/L	0.5	101	10	90 - 110	
QC Batch ID: BWE0334	Used client sample: N										

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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: BWE0334	Used client sample: N										
Bicarbonate	DUP	1309082-01	101.27	102.40		mg/L	1.1		10		
Carbonate	DUP	1309082-01	44.512	44.878		mg/L	0.8		10		
Total Alkalinity as CaCO3	DUP	1309082-01	157.31	158.83		mg/L	1.0		10		
pH	DUP	1309082-01	9.7300	9.7400		pH Units	0.1		20		
QC Batch ID: BWE0335	Used client sample: Y - Description: MW-12-3, 04/30/2013 09:00										
Bicarbonate	DUP	1308753-05	206.64	207.19		mg/L	0.3		10		
Carbonate	DUP	1308753-05	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308753-05	169.48	169.93		mg/L	0.3		10		
pH	DUP	1308753-05	8.1700	8.1600		pH Units	0.1		20		
QC Batch ID: BWE0738	Used client sample: Y - Description: MW-12-4, 04/30/2013 08:20										
Total Recoverable Calcium	DUP	1308753-04	61.689	61.060		mg/L	1.0		20		
	MS	1308753-04	61.689	71.355	10.000	mg/L		96.7		75 - 125	
	MSD	1308753-04	61.689	72.002	10.000	mg/L	0.9	103	20	75 - 125	
Total Recoverable Magnesium	DUP	1308753-04	15.449	15.416		mg/L	0.2		20		
	MS	1308753-04	15.449	25.859	10.000	mg/L		104		75 - 125	
	MSD	1308753-04	15.449	25.833	10.000	mg/L	0.1	104	20	75 - 125	
Total Recoverable Sodium	DUP	1308753-04	24.022	23.968		mg/L	0.2		20		
	MS	1308753-04	24.022	34.187	10.000	mg/L		102		75 - 125	
	MSD	1308753-04	24.022	34.594	10.000	mg/L	1.2	106	20	75 - 125	
Total Recoverable Potassium	DUP	1308753-04	2.3245	2.3258		mg/L	0.1		20		
	MS	1308753-04	2.3245	12.343	10.000	mg/L		100		75 - 125	
	MSD	1308753-04	2.3245	12.437	10.000	mg/L	0.8	101	20	75 - 125	
QC Batch ID: BWE0741	Used client sample: Y - Description: MW-24-2, 04/30/2013 13:45										
Total Recoverable Calcium	DUP	1308753-11	42.962	47.527		mg/L	10.1		20		
	MS	1308753-11	42.962	55.954	10.000	mg/L		130		75 - 125	A03
	MSD	1308753-11	42.962	54.376	10.000	mg/L	2.9	114	20	75 - 125	
Total Recoverable Magnesium	DUP	1308753-11	14.764	15.455		mg/L	4.6		20		
	MS	1308753-11	14.764	25.117	10.000	mg/L		104		75 - 125	
	MSD	1308753-11	14.764	24.360	10.000	mg/L	3.1	96.0	20	75 - 125	
Total Recoverable Sodium	DUP	1308753-11	40.516	44.354		mg/L	9.0		20		
	MS	1308753-11	40.516	51.632	10.000	mg/L		111		75 - 125	
	MSD	1308753-11	40.516	51.269	10.000	mg/L	0.7	108	20	75 - 125	
Total Recoverable Potassium	DUP	1308753-11	2.6695	2.9655		mg/L	10.5		20		
	MS	1308753-11	2.6695	12.753	10.000	mg/L		101		75 - 125	
	MSD	1308753-11	2.6695	12.493	10.000	mg/L	2.1	98.2	20	75 - 125	
QC Batch ID: BWE0850	Used client sample: Y - Description: MW-12-4, 04/30/2013 08:20										

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0850	Used client sample: Y - Description: MW-12-4, 04/30/2013 08:20										
Perchlorate	DUP	1308753-04	3.6178	3.8316		ug/L	5.7		15		J
	MS	1308753-04	3.6178	13.123	10.101	ug/L		94.1		80 - 120	
	MSD	1308753-04	3.6178	12.906	10.101	ug/L	1.7	92.0	15	80 - 120	
QC Batch ID: BWE0851	Used client sample: Y - Description: MW-24-2, 04/30/2013 13:45										
Perchlorate	DUP	308753-11RE´	11.508	10.922		ug/L	5.2		15		
	MS	308753-11RE´	11.508	30.129	20.202	ug/L		92.2		80 - 120	
	MSD	308753-11RE´	11.508	30.609	20.202	ug/L	1.6	94.6	15	80 - 120	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0171						
Hexavalent Chromium	BWE0171-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWE0192						
Hexavalent Chromium	BWE0192-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWE0738						
Total Recoverable Iron	BWE0738-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWE0741						
Total Recoverable Iron	BWE0741-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWE0743						
Total Recoverable Arsenic	BWE0743-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE0743-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWE0743-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BWE0746						
Total Recoverable Arsenic	BWE0746-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE0746-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWE0746-BLK1	ND	ug/L	1.0	0.10	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0171										
Hexavalent Chromium	BWE0171-BS1	LCS	0.051652	0.050000	mg/L	103		85 - 115		
QC Batch ID: BWE0192										
Hexavalent Chromium	BWE0192-BS1	LCS	0.052441	0.050000	mg/L	105		85 - 115		
QC Batch ID: BWE0738										
Total Recoverable Iron	BWE0738-BS1	LCS	1053.1	1000.0	ug/L	105		85 - 115		
QC Batch ID: BWE0741										
Total Recoverable Iron	BWE0741-BS1	LCS	1055.3	1000.0	ug/L	106		85 - 115		
QC Batch ID: BWE0743										
Total Recoverable Arsenic	BWE0743-BS1	LCS	92.697	100.00	ug/L	92.7		85 - 115		
Total Recoverable Chromium	BWE0743-BS1	LCS	37.556	40.000	ug/L	93.9		85 - 115		
Total Recoverable Lead	BWE0743-BS1	LCS	97.555	100.00	ug/L	97.6		85 - 115		
QC Batch ID: BWE0746										
Total Recoverable Arsenic	BWE0746-BS1	LCS	95.499	100.00	ug/L	95.5		85 - 115		
Total Recoverable Chromium	BWE0746-BS1	LCS	37.980	40.000	ug/L	95.0		85 - 115		
Total Recoverable Lead	BWE0746-BS1	LCS	100.06	100.00	ug/L	100		85 - 115		

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0171	Used client sample: Y - Description: MW-12-4, 04/30/2013 08:20										
Hexavalent Chromium	DUP	1308753-04	0.0012610	0.0012620		mg/L	0.1		10		J
	MS	1308753-04	0.0012610	0.051768	0.052632	mg/L		96.0		85 - 115	
	MSD	1308753-04	0.0012610	0.051780	0.052632	mg/L	0.0	96.0	10	85 - 115	
QC Batch ID: BWE0192	Used client sample: Y - Description: MW-24-2, 04/30/2013 13:45										
Hexavalent Chromium	DUP	1308753-11	0.0024680	0.0024560		mg/L	0.5		10		
	MS	1308753-11	0.0024680	0.053059	0.052632	mg/L		96.1		85 - 115	
	MSD	1308753-11	0.0024680	0.053091	0.052632	mg/L	0.1	96.2	10	85 - 115	
QC Batch ID: BWE0738	Used client sample: Y - Description: MW-12-4, 04/30/2013 08:20										
Total Recoverable Iron	DUP	1308753-04	17.134	21.788		ug/L	23.9		20		J,A02
	MS	1308753-04	17.134	1085.9	1000.0	ug/L		107		75 - 125	
	MSD	1308753-04	17.134	1090.6	1000.0	ug/L	0.4	107	20	75 - 125	
QC Batch ID: BWE0741	Used client sample: Y - Description: MW-24-2, 04/30/2013 13:45										
Total Recoverable Iron	DUP	1308753-11	50.950	28.195		ug/L	57.5		20		J,A02
	MS	1308753-11	50.950	1071.4	1000.0	ug/L		102		75 - 125	
	MSD	1308753-11	50.950	1057.4	1000.0	ug/L	1.3	101	20	75 - 125	
QC Batch ID: BWE0743	Used client sample: Y - Description: MW-12-4, 04/30/2013 08:20										
Total Recoverable Arsenic	DUP	1308753-04	1.7300	1.6770		ug/L	3.1		20		J
	MS	1308753-04	1.7300	98.016	100.00	ug/L		96.3		70 - 130	
	MSD	1308753-04	1.7300	98.720	100.00	ug/L	0.7	97.0	20	70 - 130	
Total Recoverable Chromium	DUP	1308753-04	0.83100	0.89400		ug/L	7.3		20		J
	MS	1308753-04	0.83100	36.914	40.000	ug/L		90.2		70 - 130	
	MSD	1308753-04	0.83100	36.605	40.000	ug/L	0.8	89.4	20	70 - 130	
Total Recoverable Lead	DUP	1308753-04	ND	ND		ug/L			20		
	MS	1308753-04	ND	94.633	100.00	ug/L		94.6		70 - 130	
	MSD	1308753-04	ND	98.293	100.00	ug/L	3.8	98.3	20	70 - 130	
QC Batch ID: BWE0746	Used client sample: Y - Description: MW-24-2, 04/30/2013 13:45										
Total Recoverable Arsenic	DUP	1308753-11	2.3740	2.5190		ug/L	5.9		20		
	MS	1308753-11	2.3740	96.461	100.00	ug/L		94.1		70 - 130	
	MSD	1308753-11	2.3740	97.196	100.00	ug/L	0.8	94.8	20	70 - 130	
Total Recoverable Chromium	DUP	1308753-11	1.7760	2.4340		ug/L	31.3		20		J,A02
	MS	1308753-11	1.7760	36.959	40.000	ug/L		88.0		70 - 130	
	MSD	1308753-11	1.7760	37.547	40.000	ug/L	1.6	89.4	20	70 - 130	
Total Recoverable Lead	DUP	1308753-11	ND	ND		ug/L			20		
	MS	1308753-11	ND	94.402	100.00	ug/L		94.4		70 - 130	
	MSD	1308753-11	ND	97.242	100.00	ug/L	3.0	97.2	20	70 - 130	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/15/2013 14:16
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A02	The difference between duplicate readings is less than the PQL.
A03	The sample concentration is more than 4 times the spike level.
A10	PQL's and MDL's were raised due to matrix interference.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/16/2013

David Conner

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Project:	JPL- GW Monitoring Wells
BC Work Order:	1308887
Invoice ID:	B146296

Enclosed are the results of analyses for samples received by the laboratory on 5/1/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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Chain of Custody and Cooler Receipt Form for 1308887 Page 1 of 4

1308887

BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

p 1 of 2

Report & Bill to:

Name:	Battelle MHTS
Address:	505 King Ave.
City:	Columbus
State: OH	ZIP: 43201
Attn:	David Conner
Phone:	(614) 458-5489
Project:	2Q13 JPL
Project #:	
Samplers Name:	Andy Wolff

Analysis Requested

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
-1	TB-8-5/1/13	5-1-13	0600	AQ	X	X	X	X	X	X	X	X	X	X	X	X			X	
-2	EB-8-5/1/13		0620		X	X	X	X	X	X	X	X	X	X	X	X			X	
-3	MW-11-5		0650		X	X	X	X	X	X	X	X	X	X	X	X			X	MS/MSD
-4	MW-11-4		0725		X	X	X	X	X	X	X	X	X	X	X	X			X	
-5	MW-11-3		0755		X	X	X	X	X	X	X	X	X	X	X	X			X	
-6	MW-11-2		0830		X	X	X	X	X	X	X	X	X	X	X	X	X		X	
-7	MW-11-1		0900		X	X	X	X	X	X	X	X	X	X	X	X			X	
-8	MW-21-5		1105		X	X	X	X	X	X	X	X	X	X	X	X			X	MS/MSD
-9	MW-21-4		1140		X	X	X	X	X	X	X	X	X	X	X	X			X	
-10	MW-21-3		1210		X	X	X	X	X	X	X	X	X	X	X	X			X	
-11	MW-21-2		1240		X	X	X	X	X	X	X	X	X	X	X	X			X	
-12	MW-21-1	↓	1310	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	

Relinquished by: (Signature) — Received By: — Date & Time: 5/1/13 1600

Relinquished by: (Signature) — Received By: — Date & Time: 5/1/13 1620

Relinquished by: (Signature) — Received By: — Date & Time: 5/1/13 1930

1308887

BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

p 2 of 2

Report & Bill to:

Name:	Battelle MHTS	Phone: (614) 458-5489	
Address:	505 King Ave.	Project: 2Q13 JPL	
City:	Columbus	Project #:	
State: OH	ZIP: 43201	Samplers Name: Andy Wolff	
Attn:	David Conner		

Analysis Requested

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
-13	DUP-5-2Q13	5-1-13	0905	AQ	X	X	X	X	X	X	X	X	X	X	X	X			X	

CHK BY: KIQ | DISTRIBUTION: MU MT KU | SUB OUT ☐

SHORT HOLDING TIME: Cr+6 (circled), NO (circled), NO (circled), OF, SS, DO, Cl2, BOD, MBAS, CCT

Relinquished by: (Signature)	Received By:	Date & Time
[signature]	Nicole	5/1/13 16:00
Nicole	[signature]	5/1/13 1630
[signature]	KOR	5/1/13 1930

Chain of Custody and Cooler Receipt Form for 1308887 Page 3 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 12 08/17/12 Page 1 Of 2

Submission #: 1308887

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☑ None ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____	Box ☐ Other ☐ (Specify)_____

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

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☑ Comments:

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

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: VOA Thermometer ID: 207 Date/Time 5/1/13 2217

Temperature: (A) 1.2 °C / (C) 1.1 °C Analyst Init SAS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
1L GENERAL MINERAL/ GENERAL PHYSICAL		B	B	B	B	B	B	B	B	B
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		C	C	C	C	C	C	C	C	C
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
4oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A 1									
40ml VOA VIAL		A 3	A 3	A 6	A 3	A 3	A 3	A 3	A 3	A 3
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ JAR										
32 OZ JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SULFIDE KIT										

SAS 5/2/13 0040

Chain of Custody and Cooler Receipt Form for 1308887 Page 4 of 4

C LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 08/17/12 Page 2 Of 2

ubmission #: 1308887

SHIPPING INFORMATION

ederal Express ☐ UPS ☐ Hand Delivery ☐
C Lab Field Service ☒ Other ☐ (Specify)_________

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_________

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

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

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

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: Vza Thermometer ID: 207 Date/Time 5/1/13 2217

Temperature: (A) 1.2 °C / (C) 1.1 °C Analyst Init SAS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	11	12	13	4	5	6	7	8	9	10
T GENERAL MINERAL/ GENERAL PHYSICAL	B	B	B							
T PE UNPRESERVED										
T INORGANIC CHEMICAL METALS										
T INORGANIC CHEMICAL METALS	C	C	C							
T CYANIDE										
T NITROGEN FORMS										
T TOTAL SULFIDE										
z. NITRATE / NITRITE										
T TOTAL ORGANIC CARBON										
T TOX										
T CHEMICAL OXYGEN DEMAND										
A PHENOLICS										
ml VOA VIAL TRAVEL BLANK										
ml VOA VIAL	A 6	A 3	A 3							
T EPA 413.1, 413.2, 418.1										
T ODOR										
ADIOLOGICAL										
ACTERIOLOGICAL										
ml VOA VIAL- 504										
T EPA 508/608/8080										
T EPA 515.1/8150										
T EPA 525										
T EPA 525 TRAVEL BLANK										
0ml EPA 547										
0ml EPA 531.1										
T EPA 548										
T EPA 549										
T EPA 632										
T EPA 8015M										
T AMBER										
OZ. JAR										
2 OZ. JAR										
OIL SLEEVE										
CB VIAL										
LASTIC BAG										
[illegible]										
[illegible]										
[illegible]										

SAS 5/2/13 0040

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308887-01	**COC Number:**	---	**Receive Date:**	05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	05/01/2013 06:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-8-5113	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): TB-8-5113			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1308887-02	**COC Number:**	---	**Receive Date:**	05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	05/01/2013 06:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB-8-5113	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): EB-8-5113			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			
1308887-03	**COC Number:**	---	**Receive Date:**	05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	05/01/2013 06:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-5	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
	Delivery Work Order:			
	Global ID: 0000000000			
	Location ID (FieldPoint): MW-11-5			
	Matrix: W			
	Sample QC Type (SACode): CS			
	Cooler ID:			

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308887-04	**COC Number:**	---	**Receive Date:**	05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	05/01/2013 07:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-4	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308887-05	**COC Number:**	---	**Receive Date:**	05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	05/01/2013 07:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-3	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308887-06	**COC Number:**	---	**Receive Date:**	05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	05/01/2013 08:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-2	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1308887-07	**COC Number:**	---	**Receive Date:**	05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	05/01/2013 09:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-11-1	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-11-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308887-08	**COC Number:**	---	**Receive Date:**	05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	05/01/2013 11:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-21-5	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-21-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1308887-09	**COC Number:**	---	**Receive Date:**	05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:**	05/01/2013 11:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-21-4	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-21-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1308887-10	**COC Number:**	---	**Receive Date:** 05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:** 05/01/2013 12:10
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-21-3	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-21-3
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308887-11	**COC Number:**	---	**Receive Date:** 05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:** 05/01/2013 12:40
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-21-2	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-21-2
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1308887-12	**COC Number:**	---	**Receive Date:** 05/01/2013 19:30
	Project Number:	JPL-GW	**Sampling Date:** 05/01/2013 13:10
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-21-1	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-21-1
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1308887-13

COC Number: ---
Project Number: JPL-GW
Sampling Location: ---
Sampling Point: DUP-5-2Q13
Sampled By: Andy Wolff of BAT

Receive Date: 05/01/2013 19:30
Sampling Date: 05/01/2013 09:05
Sample Depth: ---
Lab Matrix: Water
Sample Type: Aqueous
Delivery Work Order:
Global ID: 0000000000
Location ID (FieldPoint): DUP-5-2Q13
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-01 | **Client Sample Name:** JPL-GW, TB-8-5113, 5/1/2013 6:00:00AM, Andy Wolff

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

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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-01 | **Client Sample Name:** JPL-GW, TB-8-5113, 5/1/2013 6:00:00AM, Andy Wolff

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

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-01 | **Client Sample Name:** JPL-GW, TB-8-5113, 5/1/2013 6:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 11:41	MGC	MS-V5	1	BWE0123

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-01 | **Client Sample Name:** JPL-GW, TB-8-5113, 5/1/2013 6:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 11:41	MGC	MS-V5	1	BWE0123

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Project: JPL- GW Monitoring Wells
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Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-02 | **Client Sample Name:** JPL-GW, EB-8-5113, 5/1/2013 6:20:00AM, Andy Wolff

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

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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-02 | **Client Sample Name:** JPL-GW, EB-8-5113, 5/1/2013 6:20:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-02 | **Client Sample Name:** JPL-GW, EB-8-5113, 5/1/2013 6:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 12:04	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-02 | **Client Sample Name:** JPL-GW, EB-8-5113, 5/1/2013 6:20:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 12:04	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-02 | **Client Sample Name:** JPL-GW, EB-8-5113, 5/1/2013 6:20:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	ND	mg/L	0.10	0.018	EPA-200.7	ND		1
Total Recoverable Magnesium	ND	mg/L	0.050	0.020	EPA-200.7	ND		1
Total Recoverable Sodium	ND	mg/L	0.50	0.17	EPA-200.7	ND		1
Total Recoverable Potassium	ND	mg/L	1.0	0.10	EPA-200.7	0.12		1
Bicarbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		2
Chloride	**0.12**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.097	**J**	3
Nitrate as N	**0.062**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND	**J**	3
Sulfate	ND	mg/L	1.0	0.18	EPA-300.0	ND		3
pH	**6.21**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	ND	mg/L	6.7	6.7	EPA-160.1	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/10/13	05/10/13 18:54	JRG	PE-OP2	1	BWE0862
2	SM-2320B	05/07/13	05/07/13 13:35	FRP	MET-1	1	BWE0537
3	EPA-300.0	05/02/13	05/02/13 06:22	LD1	IC2	1	BWE0169
4	EPA-150.1	05/07/13	05/07/13 13:35	FRP	MET-1	1	BWE0537
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	0.667	BWE0118
6	EPA-353.2	05/02/13	05/02/13 09:28	TDC	KONE-1	1	BWE0280
7	EPA-314.0	05/10/13	05/10/13 14:09	LD1	IC6	1	BWE0895

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-02 | **Client Sample Name:** JPL-GW, EB-8-5113, 5/1/2013 6:20:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 02:16	LS1	KONE-1	1	BWE0290
2	EPA-200.8	05/13/13	05/13/13 19:18	SRM	PE-EL1	1	BWE0965
3	EPA-200.7	05/10/13	05/10/13 18:54	JRG	PE-OP2	1	BWE0862

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-03 | **Client Sample Name:** JPL-GW, MW-11-5, 5/1/2013 6:50:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-03 | **Client Sample Name:** JPL-GW, MW-11-5, 5/1/2013 6:50:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-03 | **Client Sample Name:** JPL-GW, MW-11-5, 5/1/2013 6:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 12:26	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-03 | **Client Sample Name:** JPL-GW, MW-11-5, 5/1/2013 6:50:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 12:26	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-03 | **Client Sample Name:** JPL-GW, MW-11-5, 5/1/2013 6:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**20**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**2.2**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**47**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**1.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.12		1
Bicarbonate	**150**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**130**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**10**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.097		3
Nitrate as N	**0.10**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**17**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.34**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**200**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/10/13	05/10/13 18:57	JRG	PE-OP2	1	BWE0862
2	SM-2320B	05/07/13	05/07/13 13:39	FRP	MET-1	1	BWE0537
3	EPA-300.0	05/02/13	05/02/13 06:36	LD1	IC2	1	BWE0169
4	EPA-150.1	05/07/13	05/07/13 13:39	FRP	MET-1	1	BWE0537
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	2	BWE0118
6	EPA-353.2	05/02/13	05/02/13 09:28	TDC	KONE-1	1	BWE0280
7	EPA-314.0	05/10/13	05/10/13 14:22	LD1	IC6	1	BWE0895

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-03 | **Client Sample Name:** JPL-GW, MW-11-5, 5/1/2013 6:50:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**6.9**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**1.7**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**210**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	**0.14**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 02:16	LS1	KONE-1	1	BWE0290
2	EPA-200.8	05/13/13	05/13/13 19:21	SRM	PE-EL1	1	BWE0965
3	EPA-200.7	05/10/13	05/10/13 18:57	JRG	PE-OP2	1	BWE0862

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-04 | **Client Sample Name:** JPL-GW, MW-11-4, 5/1/2013 7:25:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-04 | **Client Sample Name:** JPL-GW, MW-11-4, 5/1/2013 7:25:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-04 | **Client Sample Name:** JPL-GW, MW-11-4, 5/1/2013 7:25:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	99.0	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 09:26	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-04 | **Client Sample Name:** JPL-GW, MW-11-4, 5/1/2013 7:25:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 09:26	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-04 | **Client Sample Name:** JPL-GW, MW-11-4, 5/1/2013 7:25:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**11**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**11**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**26**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.12		1
Bicarbonate	**120**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	**8.8**	**mg/L**	**2.5**	**2.5**	**SM-2320B**	ND		2
Total Alkalinity as CaCO3	**110**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**11**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.097		3
Nitrate as N	ND	mg/L	0.10	0.025	EPA-300.0	ND		3
Sulfate	**1.3**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.88**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**150**	**mg/L**	**10**	**10**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/10/13	05/10/13 19:12	JRG	PE-OP2	1	BWE0862
2	SM-2320B	05/07/13	05/07/13 13:45	FRP	MET-1	1	BWE0537
3	EPA-300.0	05/02/13	05/02/13 07:44	LD1	IC2	1	BWE0169
4	EPA-150.1	05/07/13	05/07/13 13:45	FRP	MET-1	1	BWE0537
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	1	BWE0118
6	EPA-353.2	05/02/13	05/02/13 09:28	TDC	KONE-1	1	BWE0280
7	EPA-314.0	05/10/13	05/10/13 14:35	LD1	IC6	1	BWE0895

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-04 | **Client Sample Name:** JPL-GW, MW-11-4, 5/1/2013 7:25:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**0.71**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**9.7**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 02:16	LS1	KONE-1	1	BWE0290
2	EPA-200.8	05/13/13	05/13/13 18:28	SRM	PE-EL1	1	BWE0965
3	EPA-200.7	05/10/13	05/10/13 19:12	JRG	PE-OP2	1	BWE0862

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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-05 | **Client Sample Name:** JPL-GW, MW-11-3, 5/1/2013 7:55:00AM, Andy Wolff

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

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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-05 | **Client Sample Name:** JPL-GW, MW-11-3, 5/1/2013 7:55:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	**0.080**	**ug/L**	**0.50**	**0.068**	**EPA-524.2**	ND	**J**	1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-05 | **Client Sample Name:** JPL-GW, MW-11-3, 5/1/2013 7:55:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 12:49	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-05 | **Client Sample Name:** JPL-GW, MW-11-3, 5/1/2013 7:55:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 12:49	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-05 | **Client Sample Name:** JPL-GW, MW-11-3, 5/1/2013 7:55:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**42**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**14**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**27**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.12		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**11**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.097		3
Nitrate as N	**0.064**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND	**J**	3
Sulfate	**23**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.26**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**240**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/10/13	05/10/13 18:59	JRG	PE-OP2	1	BWE0862
2	SM-2320B	05/07/13	05/07/13 13:51	FRP	MET-1	1	BWE0537
3	EPA-300.0	05/02/13	05/02/13 08:38	LD1	IC2	1	BWE0169
4	EPA-150.1	05/07/13	05/07/13 13:51	FRP	MET-1	1	BWE0537
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	2	BWE0118
6	EPA-353.2	05/02/13	05/02/13 09:33	TDC	KONE-1	1	BWE0280
7	EPA-314.0	05/10/13	05/10/13 14:49	LD1	IC6	1	BWE0895

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-05 | **Client Sample Name:** JPL-GW, MW-11-3, 5/1/2013 7:55:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.4**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.91**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**530**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 03:02	LS1	KONE-1	1	BWE0290
2	EPA-200.8	05/13/13	05/13/13 19:24	SRM	PE-EL1	1	BWE0965
3	EPA-200.7	05/10/13	05/10/13 18:59	JRG	PE-OP2	1	BWE0862

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-06 | **Client Sample Name:** JPL-GW, MW-11-2, 5/1/2013 8:30:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-06 | **Client Sample Name:** JPL-GW, MW-11-2, 5/1/2013 8:30:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-06 | **Client Sample Name:** JPL-GW, MW-11-2, 5/1/2013 8:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 13:12	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-06 | **Client Sample Name:** JPL-GW, MW-11-2, 5/1/2013 8:30:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 13:12	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-06 | **Client Sample Name:** JPL-GW, MW-11-2, 5/1/2013 8:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**53**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**19**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**23**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.12		1
Bicarbonate	**220**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**16**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.097		3
Nitrate as N	**0.13**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**36**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**8.20**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**310**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/10/13	05/10/13 19:02	JRG	PE-OP2	1	BWE0862
2	SM-2320B	05/07/13	05/07/13 13:57	FRP	MET-1	1	BWE0537
3	EPA-300.0	05/02/13	05/02/13 08:52	LD1	IC2	1	BWE0169
4	EPA-150.1	05/07/13	05/07/13 13:57	FRP	MET-1	1	BWE0537
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	2	BWE0118
6	EPA-353.2	05/02/13	05/02/13 09:33	TDC	KONE-1	1	BWE0280
7	EPA-314.0	05/10/13	05/10/13 15:02	LD1	IC6	1	BWE0895

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-06 | **Client Sample Name:** JPL-GW, MW-11-2, 5/1/2013 8:30:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0012**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**1.2**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**720**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 02:16	LS1	KONE-1	1	BWE0290
2	EPA-200.8	05/13/13	05/13/13 19:27	SRM	PE-EL1	1	BWE0965
3	EPA-200.7	05/10/13	05/10/13 19:02	JRG	PE-OP2	1	BWE0862

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-07 | **Client Sample Name:** JPL-GW, MW-11-1, 5/1/2013 9:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-07 | **Client Sample Name:** JPL-GW, MW-11-1, 5/1/2013 9:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-07 | **Client Sample Name:** JPL-GW, MW-11-1, 5/1/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 13:34	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-07 | **Client Sample Name:** JPL-GW, MW-11-1, 5/1/2013 9:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 13:34	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-07 | **Client Sample Name:** JPL-GW, MW-11-1, 5/1/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**59**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**19**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**26**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.2**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.12		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**16**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.097		3
Nitrate as N	**0.35**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**34**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.97**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**310**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7
ortho-Phosphate as P	**0.033**	**mg/L**	**0.020**	**0.0038**	**EPA-365.1**	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/10/13	05/10/13 19:04	JRG	PE-OP2	1	BWE0862
2	SM-2320B	05/07/13	05/07/13 14:02	FRP	MET-1	1	BWE0537
3	EPA-300.0	05/02/13	05/02/13 09:06	LD1	IC2	1	BWE0169
4	EPA-150.1	05/07/13	05/07/13 14:02	FRP	MET-1	1	BWE0537
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	2	BWE0118
6	EPA-353.2	05/02/13	05/02/13 09:55	TDC	KONE-1	1	BWE0280
7	EPA-314.0	05/10/13	05/10/13 15:15	LD1	IC6	1	BWE0895
8	EPA-365.1	05/02/13	05/02/13 09:09	TDC	KONE-1	1	BWE0278

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-07 | **Client Sample Name:** JPL-GW, MW-11-1, 5/1/2013 9:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.8**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.51**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**130**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 02:22	LS1	KONE-1	1	BWE0290
2	EPA-200.8	05/13/13	05/13/13 19:30	SRM	PE-EL1	1	BWE0965
3	EPA-200.7	05/10/13	05/10/13 19:04	JRG	PE-OP2	1	BWE0862

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505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-08 | **Client Sample Name:** JPL-GW, MW-21-5, 5/1/2013 11:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**5.0**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-08 | **Client Sample Name:** JPL-GW, MW-21-5, 5/1/2013 11:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.59**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-08 | **Client Sample Name:** JPL-GW, MW-21-5, 5/1/2013 11:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	110	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 13:57	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-08 | **Client Sample Name:** JPL-GW, MW-21-5, 5/1/2013 11:05:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 13:57	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-08 | **Client Sample Name:** JPL-GW, MW-21-5, 5/1/2013 11:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**97**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**30**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**35**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**220**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**76**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**5.7**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**130**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.93**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**560**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.4**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/13/13	05/13/13 16:45	JRG	PE-OP2	1	BWE0961
2	SM-2320B	05/07/13	05/07/13 14:24	FRP	MET-1	1	BWE0538
3	EPA-300.0	05/02/13	05/02/13 09:19	LD1	IC2	1	BWE0170
4	EPA-150.1	05/07/13	05/07/13 14:24	FRP	MET-1	1	BWE0538
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	3.333	BWE0118
6	EPA-353.2	05/02/13	05/02/13 09:33	TDC	KONE-1	1	BWE0280
7	EPA-314.0	05/10/13	05/10/13 15:28	LD1	IC6	1	BWE0895

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-08 | **Client Sample Name:** JPL-GW, MW-21-5, 5/1/2013 11:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0018**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**1.6**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.9**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**31**	**ug/L**	**50**	**6.5**	**EPA-200.7**	9.9	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 02:39	LS1	KONE-1	1	BWE0290
2	EPA-200.8	05/13/13	05/13/13 19:33	SRM	PE-EL1	1	BWE0965
3	EPA-200.7	05/13/13	05/13/13 16:45	JRG	PE-OP2	1	BWE0961

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-09 | **Client Sample Name:** JPL-GW, MW-21-4, 5/1/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**5.2**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-09 | **Client Sample Name:** JPL-GW, MW-21-4, 5/1/2013 11:40:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-09 | **Client Sample Name:** JPL-GW, MW-21-4, 5/1/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 14:19	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-09 | **Client Sample Name:** JPL-GW, MW-21-4, 5/1/2013 11:40:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 14:19	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-09 | **Client Sample Name:** JPL-GW, MW-21-4, 5/1/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**93**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**29**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**32**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**190**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**150**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**74**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**5.0**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**130**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.72**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**520**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.4**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/13/13	05/13/13 16:48	JRG	PE-OP2	1	BWE0961
2	SM-2320B	05/07/13	05/07/13 14:36	FRP	MET-1	1	BWE0538
3	EPA-300.0	05/02/13	05/02/13 09:33	LD1	IC2	1	BWE0170
4	EPA-150.1	05/07/13	05/07/13 14:36	FRP	MET-1	1	BWE0538
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	3.333	BWE0118
6	EPA-353.2	05/02/13	05/02/13 09:33	TDC	KONE-1	1	BWE0280
7	EPA-314.0	05/10/13	05/10/13 16:08	LS1	IC6	1	BWE0895

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-09 | **Client Sample Name:** JPL-GW, MW-21-4, 5/1/2013 11:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0013**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**0.78**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**1.5**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**120**	**ug/L**	**50**	**6.5**	**EPA-200.7**	9.9		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 02:22	LS1	KONE-1	1	BWE0290
2	EPA-200.8	05/13/13	05/13/13 19:38	SRM	PE-EL1	1	BWE0965
3	EPA-200.7	05/13/13	05/13/13 16:48	JRG	PE-OP2	1	BWE0961

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-10 | **Client Sample Name:** JPL-GW, MW-21-3, 5/1/2013 12:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**2.4**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.14**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.89**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-10 | **Client Sample Name:** JPL-GW, MW-21-3, 5/1/2013 12:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	**0.26**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**4.1**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.69**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-10 | **Client Sample Name:** JPL-GW, MW-21-3, 5/1/2013 12:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	88.7	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 14:42	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-10 | **Client Sample Name:** JPL-GW, MW-21-3, 5/1/2013 12:10:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 14:42	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-10 | **Client Sample Name:** JPL-GW, MW-21-3, 5/1/2013 12:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**140**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**45**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**50**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**330**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**270**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**120**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**10**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**170**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.77**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**770**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.4**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/13/13	05/13/13 16:50	JRG	PE-OP2	1	BWE0961
2	SM-2320B	05/07/13	05/07/13 14:41	FRP	MET-1	2	BWE0538
3	EPA-300.0	05/02/13	05/02/13 10:14	LD1	IC2	1	BWE0170
4	EPA-150.1	05/07/13	05/07/13 14:41	FRP	MET-1	1	BWE0538
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	3.333	BWE0118
6	EPA-353.2	05/02/13	05/02/13 09:33	TDC	KONE-1	1	BWE0280
7	EPA-314.0	05/10/13	05/10/13 16:22	LS1	IC6	1	BWE0895

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-10 | **Client Sample Name:** JPL-GW, MW-21-3, 5/1/2013 12:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0012**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	**0.90**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.72**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**64**	**ug/L**	**50**	**6.5**	**EPA-200.7**	9.9		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 08:20	TDC	KONE-1	1	BWE0293
2	EPA-200.8	05/13/13	05/13/13 23:43	SRM	PE-EL1	1	BWE0965
3	EPA-200.7	05/13/13	05/13/13 16:50	JRG	PE-OP2	1	BWE0961

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505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-11 | **Client Sample Name:** JPL-GW, MW-21-2, 5/1/2013 12:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.66**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.24**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-11 | **Client Sample Name:** JPL-GW, MW-21-2, 5/1/2013 12:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	**0.20**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.1**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.23**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-11 | **Client Sample Name:** JPL-GW, MW-21-2, 5/1/2013 12:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	113	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 16:12	MGC	MS-V5	1	BWE0125

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-11 | **Client Sample Name:** JPL-GW, MW-21-2, 5/1/2013 12:40:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 16:12	MGC	MS-V5	1	BWE0125

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-11 | **Client Sample Name:** JPL-GW, MW-21-2, 5/1/2013 12:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**170**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**55**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**65**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.3**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**330**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**270**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**150**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**11**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**200**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.45**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**910**	**mg/L**	**50**	**50**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**2.5**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/13/13	05/13/13 16:10	JRG	PE-OP2	1	BWE0961
2	SM-2320B	05/07/13	05/07/13 14:47	FRP	MET-1	2	BWE0538
3	EPA-300.0	05/02/13	05/02/13 10:55	LD1	IC2	1	BWE0170
4	EPA-150.1	05/07/13	05/07/13 14:47	FRP	MET-1	1	BWE0538
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	5	BWE0119
6	EPA-353.2	05/02/13	05/02/13 09:35	TDC	KONE-1	1	BWE0281
7	EPA-314.0	05/10/13	05/10/13 18:48	LS1	IC6	1	BWE0896

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505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-11 | **Client Sample Name:** JPL-GW, MW-21-2, 5/1/2013 12:40:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0014**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**3.3**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		3
Total Recoverable Iron	**18**	**ug/L**	**50**	**6.5**	**EPA-200.7**	9.9	**J**	4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 08:20	TDC	KONE-1	1	BWE0293
2	EPA-200.8	05/13/13	05/13/13 19:59	SRM	PE-EL1	1	BWE0970
3	EPA-200.8	05/15/13	05/15/13 20:48	srm	PE-EL1	1	BWE1177
4	EPA-200.7	05/13/13	05/13/13 16:10	JRG	PE-OP2	1	BWE0961

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-12 | **Client Sample Name:** JPL-GW, MW-21-1, 5/1/2013 1:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**2.0**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-12 | **Client Sample Name:** JPL-GW, MW-21-1, 5/1/2013 1:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.50**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.10**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-12 | **Client Sample Name:** JPL-GW, MW-21-1, 5/1/2013 1:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 15:04	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-12 | **Client Sample Name:** JPL-GW, MW-21-1, 5/1/2013 1:10:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 15:04	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-12 | **Client Sample Name:** JPL-GW, MW-21-1, 5/1/2013 1:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**150**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**50**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**37**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**240**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**130**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**13**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**220**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.20**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**860**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.4**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/13/13	05/13/13 16:53	JRG	PE-OP2	1	BWE0961
2	SM-2320B	05/07/13	05/07/13 14:52	FRP	MET-1	2	BWE0538
3	EPA-300.0	05/02/13	05/02/13 11:49	LD1	IC2	1	BWE0170
4	EPA-150.1	05/07/13	05/07/13 14:52	FRP	MET-1	1	BWE0538
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	3.333	BWE0118
6	EPA-353.2	05/02/13	05/02/13 09:39	TDC	KONE-1	1	BWE0281
7	EPA-314.0	05/10/13	05/10/13 19:01	LS1	IC6	1	BWE0896

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-12 | **Client Sample Name:** JPL-GW, MW-21-1, 5/1/2013 1:10:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0010**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.4**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	3
Total Recoverable Iron	**40**	**ug/L**	**50**	**6.5**	**EPA-200.7**	9.9	**J**	4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 08:20	TDC	KONE-1	1	BWE0293
2	EPA-200.8	05/13/13	05/13/13 20:59	SRM	PE-EL1	1	BWE0970
3	EPA-200.8	05/15/13	05/15/13 20:51	srm	PE-EL1	1	BWE1177
4	EPA-200.7	05/13/13	05/13/13 16:53	JRG	PE-OP2	1	BWE0961

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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-13 | **Client Sample Name:** JPL-GW, DUP-5-2Q13, 5/1/2013 9:05:00AM, Andy Wolff

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

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505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-13 | **Client Sample Name:** JPL-GW, DUP-5-2Q13, 5/1/2013 9:05:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1308887-13 | **Client Sample Name:** JPL-GW, DUP-5-2Q13, 5/1/2013 9:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND	V11	1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	87.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 15:27	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1308887-13 | **Client Sample Name:** JPL-GW, DUP-5-2Q13, 5/1/2013 9:05:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/02/13	05/02/13 15:27	MGC	MS-V5	1	BWE0123

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1308887-13 | **Client Sample Name:** JPL-GW, DUP-5-2Q13, 5/1/2013 9:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**59**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**19**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**25**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	ND		1
Bicarbonate	**250**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**16**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**0.36**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**34**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.91**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**340**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/13/13	05/13/13 17:23	JRG	PE-OP2	1	BWE0962
2	SM-2320B	05/07/13	05/07/13 14:57	FRP	MET-1	1	BWE0538
3	EPA-300.0	05/02/13	05/02/13 12:03	LD1	IC2	1	BWE0170
4	EPA-150.1	05/07/13	05/07/13 14:57	FRP	MET-1	1	BWE0538
5	EPA-160.1	05/02/13	05/02/13 07:55	NW1	MANUAL	2	BWE0119
6	EPA-353.2	05/02/13	05/02/13 09:33	TDC	KONE-1	1	BWE0281
7	EPA-314.0	05/10/13	05/10/13 19:15	LS1	IC6	1	BWE0896

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1308887-13 | **Client Sample Name:** JPL-GW, DUP-5-2Q13, 5/1/2013 9:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		3
Total Recoverable Iron	**130**	**ug/L**	**50**	**6.5**	**EPA-200.7**	10		4
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 02:22	LS1	KONE-1	1	BWE0290
2	EPA-200.8	05/13/13	05/13/13 21:02	SRM	PE-EL1	1	BWE0970
3	EPA-200.8	05/15/13	05/15/13 20:54	srm	PE-EL1	1	BWE1177
4	EPA-200.7	05/13/13	05/13/13 17:23	JRG	PE-OP2	1	BWE0962

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0123						
Benzene	BWE0123-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWE0123-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWE0123-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWE0123-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWE0123-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWE0123-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWE0123-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWE0123-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWE0123-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWE0123-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWE0123-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWE0123-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWE0123-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWE0123-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWE0123-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWE0123-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BWE0123-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWE0123-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWE0123-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWE0123-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWE0123-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWE0123-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWE0123-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWE0123-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWE0123-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWE0123-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWE0123-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWE0123-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWE0123-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWE0123-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWE0123-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWE0123-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWE0123-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWE0123-BLK1	ND	ug/L	0.50	0.14	

Battelle MHTS
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0123						
trans-1,3-Dichloropropene	BWE0123-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWE0123-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWE0123-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWE0123-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWE0123-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWE0123-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWE0123-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWE0123-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWE0123-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWE0123-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWE0123-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWE0123-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWE0123-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWE0123-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWE0123-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWE0123-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BWE0123-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWE0123-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWE0123-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWE0123-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWE0123-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWE0123-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWE0123-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWE0123-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWE0123-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWE0123-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWE0123-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWE0123-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWE0123-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWE0123-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWE0123-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWE0123-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWE0123-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWE0123-BLK1	ND	ug/L	4.0	0.97	

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0123						
Ethyl t-butyl ether	BWE0123-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWE0123-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWE0123-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWE0123-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWE0123-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWE0123-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWE0123-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWE0123-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWE0123-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWE0123-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWE0123-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWE0123-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWE0123-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWE0123-BLK1	107	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWE0123-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWE0123-BLK1	93.4	%	80 - 120 (LCL - UCL)		
QC Batch ID: BWE0125						
Benzene	BWE0125-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWE0125-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWE0125-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWE0125-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWE0125-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWE0125-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWE0125-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWE0125-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWE0125-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWE0125-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWE0125-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWE0125-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWE0125-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWE0125-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWE0125-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWE0125-BLK1	ND	ug/L	0.50	0.15	

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Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0125						
Dibromochloromethane	BWE0125-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWE0125-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWE0125-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWE0125-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWE0125-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWE0125-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWE0125-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWE0125-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWE0125-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWE0125-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWE0125-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWE0125-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWE0125-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWE0125-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWE0125-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWE0125-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWE0125-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWE0125-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	BWE0125-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWE0125-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWE0125-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWE0125-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWE0125-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWE0125-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWE0125-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWE0125-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWE0125-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWE0125-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWE0125-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWE0125-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWE0125-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWE0125-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWE0125-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWE0125-BLK1	ND	ug/L	0.50	0.19	

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Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0125						
1,1,1-Trichloroethane	BWE0125-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWE0125-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWE0125-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWE0125-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWE0125-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWE0125-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWE0125-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWE0125-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWE0125-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWE0125-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWE0125-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWE0125-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWE0125-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWE0125-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWE0125-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWE0125-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWE0125-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWE0125-BLK1	ND	ug/L	4.0	0.97	
Ethyl t-butyl ether	BWE0125-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWE0125-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWE0125-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWE0125-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWE0125-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWE0125-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWE0125-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWE0125-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWE0125-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWE0125-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWE0125-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWE0125-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWE0125-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWE0125-BLK1	108	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWE0125-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWE0125-BLK1	90.1	%	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: BWE0123										
Benzene	BWE0123-BS1	LCS	25.650	25.000	ug/L	103		70 - 130		
Bromodichloromethane	BWE0123-BS1	LCS	25.380	25.000	ug/L	102		70 - 130		
Chlorobenzene	BWE0123-BS1	LCS	24.670	25.000	ug/L	98.7		70 - 130		
Chloroethane	BWE0123-BS1	LCS	27.640	25.000	ug/L	111		70 - 130		
1,4-Dichlorobenzene	BWE0123-BS1	LCS	26.160	25.000	ug/L	105		70 - 130		
1,1-Dichloroethane	BWE0123-BS1	LCS	24.570	25.000	ug/L	98.3		70 - 130		
1,1-Dichloroethene	BWE0123-BS1	LCS	25.940	25.000	ug/L	104		70 - 130		
Toluene	BWE0123-BS1	LCS	25.990	25.000	ug/L	104		70 - 130		
Trichloroethene	BWE0123-BS1	LCS	24.650	25.000	ug/L	98.6		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWE0123-BS1	LCS	9.9900	10.000	ug/L	99.9		75 - 125		
Toluene-d8 (Surrogate)	BWE0123-BS1	LCS	10.370	10.000	ug/L	104		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWE0123-BS1	LCS	10.150	10.000	ug/L	102		80 - 120		
QC Batch ID: BWE0125										
Benzene	BWE0125-BS1	LCS	29.750	25.000	ug/L	119		70 - 130		
Bromodichloromethane	BWE0125-BS1	LCS	29.680	25.000	ug/L	119		70 - 130		
Chlorobenzene	BWE0125-BS1	LCS	27.990	25.000	ug/L	112		70 - 130		
Chloroethane	BWE0125-BS1	LCS	31.690	25.000	ug/L	127		70 - 130		
1,4-Dichlorobenzene	BWE0125-BS1	LCS	29.940	25.000	ug/L	120		70 - 130		
1,1-Dichloroethane	BWE0125-BS1	LCS	28.230	25.000	ug/L	113		70 - 130		
1,1-Dichloroethene	BWE0125-BS1	LCS	28.900	25.000	ug/L	116		70 - 130		
Toluene	BWE0125-BS1	LCS	29.580	25.000	ug/L	118		70 - 130		
Trichloroethene	BWE0125-BS1	LCS	30.400	25.000	ug/L	122		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWE0125-BS1	LCS	10.570	10.000	ug/L	106		75 - 125		
Toluene-d8 (Surrogate)	BWE0125-BS1	LCS	10.590	10.000	ug/L	106		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWE0125-BS1	LCS	10.290	10.000	ug/L	103		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: BWE0123	Used client sample: Y - Description: MW-11-4, 05/01/2013 07:25										
Benzene	MS	1308887-04	ND	26.220	25.000	ug/L		105		70 - 130	
	MSD	1308887-04	ND	26.660	25.000	ug/L	1.7	107	20	70 - 130	
Bromodichloromethane	MS	1308887-04	ND	26.480	25.000	ug/L		106		70 - 130	
	MSD	1308887-04	ND	27.280	25.000	ug/L	3.0	109	20	70 - 130	
Chlorobenzene	MS	1308887-04	ND	25.680	25.000	ug/L		103		70 - 130	
	MSD	1308887-04	ND	26.280	25.000	ug/L	2.3	105	20	70 - 130	
Chloroethane	MS	1308887-04	ND	28.120	25.000	ug/L		112		70 - 130	
	MSD	1308887-04	ND	28.800	25.000	ug/L	2.4	115	20	70 - 130	
1,4-Dichlorobenzene	MS	1308887-04	ND	26.890	25.000	ug/L		108		70 - 130	
	MSD	1308887-04	ND	27.530	25.000	ug/L	2.4	110	20	70 - 130	
1,1-Dichloroethane	MS	1308887-04	ND	25.000	25.000	ug/L		100		70 - 130	
	MSD	1308887-04	ND	25.600	25.000	ug/L	2.4	102	20	70 - 130	
1,1-Dichloroethene	MS	1308887-04	ND	25.810	25.000	ug/L		103		70 - 130	
	MSD	1308887-04	ND	26.190	25.000	ug/L	1.5	105	20	70 - 130	
Toluene	MS	1308887-04	ND	26.020	25.000	ug/L		104		70 - 130	
	MSD	1308887-04	ND	26.410	25.000	ug/L	1.5	106	20	70 - 130	
Trichloroethene	MS	1308887-04	ND	25.000	25.000	ug/L		100		70 - 130	
	MSD	1308887-04	ND	25.270	25.000	ug/L	1.1	101	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1308887-04	ND	9.7800	10.000	ug/L		97.8		75 - 125	
	MSD	1308887-04	ND	9.8500	10.000	ug/L	0.7	98.5		75 - 125	
Toluene-d8 (Surrogate)	MS	1308887-04	ND	10.020	10.000	ug/L		100		80 - 120	
	MSD	1308887-04	ND	10.050	10.000	ug/L	0.3	100		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1308887-04	ND	10.070	10.000	ug/L		101		80 - 120	
	MSD	1308887-04	ND	10.320	10.000	ug/L	2.5	103		80 - 120	
QC Batch ID: BWE0125	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
Benzene	MS	1308887-11	ND	26.690	25.000	ug/L		107		70 - 130	
	MSD	1308887-11	ND	27.210	25.000	ug/L	1.9	109	20	70 - 130	
Bromodichloromethane	MS	1308887-11	ND	27.620	25.000	ug/L		110		70 - 130	
	MSD	1308887-11	ND	27.680	25.000	ug/L	0.2	111	20	70 - 130	
Chlorobenzene	MS	1308887-11	ND	25.150	25.000	ug/L		101		70 - 130	
	MSD	1308887-11	ND	25.780	25.000	ug/L	2.5	103	20	70 - 130	
Chloroethane	MS	1308887-11	ND	28.290	25.000	ug/L		113		70 - 130	
	MSD	1308887-11	ND	29.310	25.000	ug/L	3.5	117	20	70 - 130	
1,4-Dichlorobenzene	MS	1308887-11	ND	26.510	25.000	ug/L		106		70 - 130	
	MSD	1308887-11	ND	27.570	25.000	ug/L	3.9	110	20	70 - 130	
1,1-Dichloroethane	MS	1308887-11	ND	25.350	25.000	ug/L		101		70 - 130	
	MSD	1308887-11	ND	26.010	25.000	ug/L	2.6	104	20	70 - 130	

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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: BWE0125	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
1,1-Dichloroethene	MS	1308887-11	ND	25.860	25.000	ug/L		103		70 - 130	
	MSD	1308887-11	ND	26.540	25.000	ug/L	2.6	106	20	70 - 130	
Toluene	MS	1308887-11	ND	26.440	25.000	ug/L		106		70 - 130	
	MSD	1308887-11	ND	26.760	25.000	ug/L	1.2	107	20	70 - 130	
Trichloroethene	MS	1308887-11	0.23000	25.440	25.000	ug/L		101		70 - 130	
	MSD	1308887-11	0.23000	26.280	25.000	ug/L	3.2	104	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1308887-11	ND	10.440	10.000	ug/L		104		75 - 125	
	MSD	1308887-11	ND	10.550	10.000	ug/L	1.0	106		75 - 125	
Toluene-d8 (Surrogate)	MS	1308887-11	ND	10.420	10.000	ug/L		104		80 - 120	
	MSD	1308887-11	ND	10.210	10.000	ug/L	2.0	102		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1308887-11	ND	9.9300	10.000	ug/L		99.3		80 - 120	
	MSD	1308887-11	ND	10.190	10.000	ug/L	2.6	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: BWE0123						
Chloroacetonitrile	BWE0123-BLK1	0	ug/L			
1-Chlorobutane	BWE0123-BLK1	0	ug/L			
1,1-Dichloropropanone	BWE0123-BLK1	0	ug/L			
Methyl acrylate	BWE0123-BLK1	0	ug/L			
Nitrobenzene	BWE0123-BLK1	0	ug/L			
2-Nitropropane	BWE0123-BLK1	0	ug/L			
QC Batch ID: BWE0125						
Chloroacetonitrile	BWE0125-BLK1	0	ug/L			
1-Chlorobutane	BWE0125-BLK1	0	ug/L			
1,1-Dichloropropanone	BWE0125-BLK1	0	ug/L			
Methyl acrylate	BWE0125-BLK1	0	ug/L			
Nitrobenzene	BWE0125-BLK1	0	ug/L			
2-Nitropropane	BWE0125-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: BWE0118						
Total Dissolved Solids @ 180 C	BWE0118-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWE0119						
Total Dissolved Solids @ 180 C	BWE0119-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWE0169						
Chloride	BWE0169-BLK1	0.097000	mg/L	0.50	0.067	J
Nitrate as N	BWE0169-BLK1	ND	mg/L	0.10	0.025	
Sulfate	BWE0169-BLK1	ND	mg/L	1.0	0.18	
QC Batch ID: BWE0170						
Chloride	BWE0170-BLK1	0.13500	mg/L	0.50	0.067	J
Nitrate as N	BWE0170-BLK1	ND	mg/L	0.10	0.025	
Sulfate	BWE0170-BLK1	ND	mg/L	1.0	0.18	
QC Batch ID: BWE0278						
ortho-Phosphate as P	BWE0278-BLK1	ND	mg/L	0.020	0.0038	
QC Batch ID: BWE0280						
Nitrite as N	BWE0280-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWE0281						
Nitrite as N	BWE0281-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWE0537						
Bicarbonate	BWE0537-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0537-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0537-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0538						
Bicarbonate	BWE0538-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0538-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0538-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0862						
Total Recoverable Calcium	BWE0862-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0862-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0862-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0862-BLK1	0.12285	mg/L	1.0	0.10	J

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Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0895						
Perchlorate	BWE0895-BLK1	ND	ug/L	4.0	0.81	
QC Batch ID: BWE0896						
Perchlorate	BWE0896-BLK1	ND	ug/L	4.0	0.81	
QC Batch ID: BWE0961						
Total Recoverable Calcium	BWE0961-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0961-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0961-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0961-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BWE0962						
Total Recoverable Calcium	BWE0962-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE0962-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE0962-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE0962-BLK1	ND	mg/L	1.0	0.10	

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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: BWE0118										
Total Dissolved Solids @ 180 C	BWE0118-BS1	LCS	540.00	586.00	mg/L	92.2		90 - 110		
QC Batch ID: BWE0119										
Total Dissolved Solids @ 180 C	BWE0119-BS1	LCS	560.00	586.00	mg/L	95.6		90 - 110		
QC Batch ID: BWE0169										
Chloride	BWE0169-BS1	LCS	51.060	50.000	mg/L	102		90 - 110		
Nitrate as N	BWE0169-BS1	LCS	5.0380	5.0000	mg/L	101		90 - 110		
Sulfate	BWE0169-BS1	LCS	101.47	100.00	mg/L	101		90 - 110		
QC Batch ID: BWE0170										
Chloride	BWE0170-BS1	LCS	51.423	50.000	mg/L	103		90 - 110		
Nitrate as N	BWE0170-BS1	LCS	5.0130	5.0000	mg/L	100		90 - 110		
Sulfate	BWE0170-BS1	LCS	102.30	100.00	mg/L	102		90 - 110		
QC Batch ID: BWE0278										
ortho-Phosphate as P	BWE0278-BS1	LCS	0.20081	0.20000	mg/L	100		90 - 110		
QC Batch ID: BWE0280										
Nitrite as N	BWE0280-BS1	LCS	0.49253	0.50000	mg/L	98.5		90 - 110		
QC Batch ID: BWE0281										
Nitrite as N	BWE0281-BS1	LCS	0.49028	0.50000	mg/L	98.1		90 - 110		
QC Batch ID: BWE0537										
Total Alkalinity as CaCO3	BWE0537-BS3	LCS	98.280	100.00	mg/L	98.3		90 - 110		
pH	BWE0537-BS2	LCS	7.0700	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0538										
Total Alkalinity as CaCO3	BWE0538-BS3	LCS	99.190	100.00	mg/L	99.2		90 - 110		
pH	BWE0538-BS2	LCS	7.0600	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0862										
Total Recoverable Calcium	BWE0862-BS1	LCS	9.9156	10.000	mg/L	99.2		85 - 115		
Total Recoverable Magnesium	BWE0862-BS1	LCS	10.189	10.000	mg/L	102		85 - 115		
Total Recoverable Sodium	BWE0862-BS1	LCS	9.6173	10.000	mg/L	96.2		85 - 115		
Total Recoverable Potassium	BWE0862-BS1	LCS	9.6189	10.000	mg/L	96.2		85 - 115		
QC Batch ID: BWE0895										
Perchlorate	BWE0895-BS1	LCS	10.745	10.000	ug/L	107		85 - 115		
QC Batch ID: BWE0896										
Perchlorate	BWE0896-BS1	LCS	9.6696	10.000	ug/L	96.7		85 - 115		

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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: BWE0961										
Total Recoverable Calcium	BWE0961-BS1	LCS	10.177	10.000	mg/L	102		85 - 115		
Total Recoverable Magnesium	BWE0961-BS1	LCS	10.297	10.000	mg/L	103		85 - 115		
Total Recoverable Sodium	BWE0961-BS1	LCS	9.4993	10.000	mg/L	95.0		85 - 115		
Total Recoverable Potassium	BWE0961-BS1	LCS	9.5359	10.000	mg/L	95.4		85 - 115		
QC Batch ID: BWE0962										
Total Recoverable Calcium	BWE0962-BS1	LCS	10.234	10.000	mg/L	102		85 - 115		
Total Recoverable Magnesium	BWE0962-BS1	LCS	10.231	10.000	mg/L	102		85 - 115		
Total Recoverable Sodium	BWE0962-BS1	LCS	9.6603	10.000	mg/L	96.6		85 - 115		
Total Recoverable Potassium	BWE0962-BS1	LCS	9.6480	10.000	mg/L	96.5		85 - 115		

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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: BWE0118	Used client sample: Y - Description: MW-11-4, 05/01/2013 07:25										
Total Dissolved Solids @ 180 C	DUP	1308887-04	146.00	142.00		mg/L	2.8		10		
QC Batch ID: BWE0119	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
Total Dissolved Solids @ 180 C	DUP	1308887-11	910.00	900.00		mg/L	1.1		10		
QC Batch ID: BWE0169	Used client sample: Y - Description: MW-11-4, 05/01/2013 07:25										
Chloride	DUP	1308887-04	11.075	11.097		mg/L	0.2		10		
	MS	1308887-04	11.075	64.468	50.505	mg/L		106		80 - 120	
	MSD	1308887-04	11.075	64.603	50.505	mg/L	0.2	106	10	80 - 120	
Nitrate as N	DUP	1308887-04	ND	ND		mg/L			10		
	MS	1308887-04	ND	5.0141	5.0505	mg/L		99.3		80 - 120	
	MSD	1308887-04	ND	5.0838	5.0505	mg/L	1.4	101	10	80 - 120	
Sulfate	DUP	1308887-04	1.2970	1.2630		mg/L	2.7		10		
	MS	1308887-04	1.2970	103.71	101.01	mg/L		101		80 - 120	
	MSD	1308887-04	1.2970	103.93	101.01	mg/L	0.2	102	10	80 - 120	
QC Batch ID: BWE0170	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
Chloride	DUP	308887-11RE´	148.53	148.47		mg/L	0.0		10		
	MS	308887-11RE´	148.53	249.52	101.01	mg/L		100		80 - 120	
	MSD	308887-11RE´	148.53	251.14	101.01	mg/L	0.6	102	10	80 - 120	
Nitrate as N	DUP	308887-11RE´	10.570	10.498		mg/L	0.7		10		
	MS	308887-11RE´	10.570	21.129	10.101	mg/L		105		80 - 120	
	MSD	308887-11RE´	10.570	21.123	10.101	mg/L	0.0	104	10	80 - 120	
Sulfate	DUP	308887-11RE´	198.03	197.29		mg/L	0.4		10		
	MS	308887-11RE´	198.03	415.96	202.02	mg/L		108		80 - 120	
	MSD	308887-11RE´	198.03	416.24	202.02	mg/L	0.1	108	10	80 - 120	
QC Batch ID: BWE0278	Used client sample: Y - Description: MW-11-1, 05/01/2013 09:00										
ortho-Phosphate as P	DUP	1308887-07	0.032693	0.032012		mg/L	2.1		10		
	MS	1308887-07	0.032693	0.24520	0.21053	mg/L		101		90 - 110	
	MSD	1308887-07	0.032693	0.24451	0.21053	mg/L	0.3	101	10	90 - 110	
QC Batch ID: BWE0280	Used client sample: Y - Description: MW-11-4, 05/01/2013 07:25										
Nitrite as N	DUP	1308887-04	ND	ND		mg/L			10		
	MS	1308887-04	ND	0.51362	0.52632	mg/L		97.6		90 - 110	
	MSD	1308887-04	ND	0.52406	0.52632	mg/L	2.0	99.6	10	90 - 110	
QC Batch ID: BWE0281	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
Nitrite as N	DUP	1308887-11	ND	ND		mg/L			10		
	MS	1308887-11	ND	0.53738	0.52632	mg/L		102		90 - 110	
	MSD	1308887-11	ND	0.54502	0.52632	mg/L	1.4	104	10	90 - 110	
QC Batch ID: BWE0537	Used client sample: N										

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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: BWE0537	Used client sample: N										
Bicarbonate	DUP	1308875-07	139.86	140.61		mg/L	0.5		10		
Carbonate	DUP	1308875-07	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308875-07	114.71	115.32		mg/L	0.5		10		
pH	DUP	1308875-07	7.7500	7.7700		pH Units	0.3		20		
QC Batch ID: BWE0538	Used client sample: Y - Description: MW-21-5, 05/01/2013 11:05										
Bicarbonate	DUP	1308887-08	224.08	224.81		mg/L	0.3		10		
Carbonate	DUP	1308887-08	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1308887-08	183.78	184.38		mg/L	0.3		10		
pH	DUP	1308887-08	7.9300	7.9300		pH Units	0		20		
QC Batch ID: BWE0862	Used client sample: Y - Description: MW-11-4, 05/01/2013 07:25										
Total Recoverable Calcium	DUP	1308887-04	11.386	10.693		mg/L	6.3		20		
	MS	1308887-04	11.386	21.381	10.000	mg/L		100		75 - 125	
	MSD	1308887-04	11.386	21.083	10.000	mg/L	1.4	97.0	20	75 - 125	
Total Recoverable Magnesium	DUP	1308887-04	11.340	10.668		mg/L	6.1		20		
	MS	1308887-04	11.340	21.150	10.000	mg/L		98.1		75 - 125	
	MSD	1308887-04	11.340	21.049	10.000	mg/L	0.5	97.1	20	75 - 125	
Total Recoverable Sodium	DUP	1308887-04	26.069	24.351		mg/L	6.8		20		
	MS	1308887-04	26.069	35.568	10.000	mg/L		95.0		75 - 125	
	MSD	1308887-04	26.069	35.332	10.000	mg/L	0.7	92.6	20	75 - 125	
Total Recoverable Potassium	DUP	1308887-04	2.1159	1.9951		mg/L	5.9		20		
	MS	1308887-04	2.1159	11.792	10.000	mg/L		96.8		75 - 125	
	MSD	1308887-04	2.1159	11.658	10.000	mg/L	1.1	95.4	20	75 - 125	
QC Batch ID: BWE0895	Used client sample: Y - Description: MW-11-4, 05/01/2013 07:25										
Perchlorate	DUP	1308887-04	ND	ND		ug/L			15		
	MS	1308887-04	ND	10.742	10.101	ug/L		106		80 - 120	
	MSD	1308887-04	ND	9.8484	10.101	ug/L	8.7	97.5	15	80 - 120	
QC Batch ID: BWE0896	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
Perchlorate	DUP	1308887-11	2.5067	2.2877		ug/L	9.1		15		J
	MS	1308887-11	2.5067	11.152	10.101	ug/L		85.6		80 - 120	
	MSD	1308887-11	2.5067	11.917	10.101	ug/L	6.6	93.2	15	80 - 120	
QC Batch ID: BWE0961	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
Total Recoverable Calcium	DUP	1308887-11	166.75	157.09		mg/L	6.0		20		
	MS	1308887-11	166.75	162.88	10.000	mg/L		-38.7		75 - 125	A03
	MSD	1308887-11	166.75	173.99	10.000	mg/L	6.6	72.4	20	75 - 125	A03

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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: BWE0961	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
Total Recoverable Magnesium	DUP	1308887-11	54.626	52.760		mg/L	3.5		20		
	MS	1308887-11	54.626	60.504	10.000	mg/L		58.8		75 - 125	A03
	MSD	1308887-11	54.626	64.840	10.000	mg/L	6.9	102	20	75 - 125	
Total Recoverable Sodium	DUP	1308887-11	64.627	60.468		mg/L	6.6		20		
	MS	1308887-11	64.627	69.238	10.000	mg/L		46.1		75 - 125	A03
	MSD	1308887-11	64.627	73.398	10.000	mg/L	5.8	87.7	20	75 - 125	
Total Recoverable Potassium	DUP	1308887-11	3.3308	3.2326		mg/L	3.0		20		
	MS	1308887-11	3.3308	13.052	10.000	mg/L		97.2		75 - 125	
	MSD	1308887-11	3.3308	13.729	10.000	mg/L	5.1	104	20	75 - 125	
QC Batch ID: BWE0962	Used client sample: N										
Total Recoverable Calcium	DUP	1308927-02	123.53	124.30		mg/L	0.6		20		
	MS	1308927-02	123.53	137.12	10.000	mg/L		136		75 - 125	A03
	MSD	1308927-02	123.53	121.69	10.000	mg/L	11.9	-18.4	20	75 - 125	A03
Total Recoverable Magnesium	DUP	1308927-02	33.393	33.535		mg/L	0.4		20		
	MS	1308927-02	33.393	44.607	10.000	mg/L		112		75 - 125	
	MSD	1308927-02	33.393	39.504	10.000	mg/L	12.1	61.1	20	75 - 125	Q03
Total Recoverable Sodium	DUP	1308927-02	36.109	36.545		mg/L	1.2		20		
	MS	1308927-02	36.109	47.766	10.000	mg/L		117		75 - 125	
	MSD	1308927-02	36.109	41.355	10.000	mg/L	14.4	52.5	20	75 - 125	Q03
Total Recoverable Potassium	DUP	1308927-02	5.9276	5.9775		mg/L	0.8		20		
	MS	1308927-02	5.9276	16.350	10.000	mg/L		104		75 - 125	
	MSD	1308927-02	5.9276	14.181	10.000	mg/L	14.2	82.5	20	75 - 125	

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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: BWE0290						
Hexavalent Chromium	BWE0290-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWE0293						
Hexavalent Chromium	BWE0293-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWE0862						
Total Recoverable Iron	BWE0862-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWE0961						
Total Recoverable Iron	BWE0961-BLK1	9.8807	ug/L	50	6.5	J
QC Batch ID: BWE0962						
Total Recoverable Iron	BWE0962-BLK1	10.382	ug/L	50	6.5	J
QC Batch ID: BWE0965						
Total Recoverable Arsenic	BWE0965-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE0965-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWE0965-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BWE0970						
Total Recoverable Arsenic	BWE0970-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Lead	BWE0970-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BWE1177						
Total Recoverable Chromium	BWE1177-BLK1	ND	ug/L	3.0	0.50	

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Metals Analysis

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BWE0290										
Hexavalent Chromium	BWE0290-BS1	LCS	0.050484	0.050000	mg/L	101		85 - 115		
QC Batch ID: BWE0293										
Hexavalent Chromium	BWE0293-BS1	LCS	0.048542	0.050000	mg/L	97.1		85 - 115		
QC Batch ID: BWE0862										
Total Recoverable Iron	BWE0862-BS1	LCS	1043.3	1000.0	ug/L	104		85 - 115		
QC Batch ID: BWE0961										
Total Recoverable Iron	BWE0961-BS1	LCS	1048.3	1000.0	ug/L	105		85 - 115		
QC Batch ID: BWE0962										
Total Recoverable Iron	BWE0962-BS1	LCS	1062.3	1000.0	ug/L	106		85 - 115		
QC Batch ID: BWE0965										
Total Recoverable Arsenic	BWE0965-BS1	LCS	100.58	100.00	ug/L	101		85 - 115		
Total Recoverable Chromium	BWE0965-BS1	LCS	43.305	40.000	ug/L	108		85 - 115		
Total Recoverable Lead	BWE0965-BS1	LCS	108.57	100.00	ug/L	109		85 - 115		
QC Batch ID: BWE0970										
Total Recoverable Arsenic	BWE0970-BS1	LCS	100.44	100.00	ug/L	100		85 - 115		
Total Recoverable Lead	BWE0970-BS1	LCS	106.08	100.00	ug/L	106		85 - 115		
QC Batch ID: BWE1177										
Total Recoverable Chromium	BWE1177-BS1	LCS	40.101	40.000	ug/L	100		85 - 115		

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Project Manager: David Conner

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BWE0290	Used client sample: Y - Description: MW-11-4, 05/01/2013 07:25										
Hexavalent Chromium	DUP	1308887-04	ND	ND		mg/L			10		
	MS	1308887-04	ND	0.042997	0.052632	mg/L		81.7		85 - 115	Q03
	MSD	1308887-04	ND	0.042981	0.052632	mg/L	0.0	81.7	10	85 - 115	Q03
QC Batch ID: BWE0293	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
Hexavalent Chromium	DUP	1308887-11	0.0014210	0.0010790		mg/L	27.4		10		J,A02
	MS	1308887-11	0.0014210	0.051488	0.052632	mg/L		95.1		85 - 115	
	MSD	1308887-11	0.0014210	0.051323	0.052632	mg/L	0.3	94.8	10	85 - 115	
QC Batch ID: BWE0862	Used client sample: Y - Description: MW-11-4, 05/01/2013 07:25										
Total Recoverable Iron	DUP	1308887-04	9.7091	11.073		ug/L	13.1		20		J
	MS	1308887-04	9.7091	1032.5	1000.0	ug/L		102		75 - 125	
	MSD	1308887-04	9.7091	1040.8	1000.0	ug/L	0.8	103	20	75 - 125	
QC Batch ID: BWE0961	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
Total Recoverable Iron	DUP	1308887-11	17.503	24.027		ug/L	31.4		20		J,A02
	MS	1308887-11	17.503	1030.9	1000.0	ug/L		101		75 - 125	
	MSD	1308887-11	17.503	1086.8	1000.0	ug/L	5.3	107	20	75 - 125	
QC Batch ID: BWE0962	Used client sample: N										
Total Recoverable Iron	DUP	1308927-02	24.799	24.914		ug/L	0.5		20		J
	MS	1308927-02	24.799	1089.2	1000.0	ug/L		106		75 - 125	
	MSD	1308927-02	24.799	942.21	1000.0	ug/L	14.5	91.7	20	75 - 125	
QC Batch ID: BWE0965	Used client sample: Y - Description: MW-11-4, 05/01/2013 07:25										
Total Recoverable Arsenic	DUP	1308887-04	0.71200	0.94800		ug/L	28.4		20		J,A02
	MS	1308887-04	0.71200	105.44	100.00	ug/L		105		70 - 130	
	MSD	1308887-04	0.71200	103.06	100.00	ug/L	2.3	102	20	70 - 130	
Total Recoverable Chromium	DUP	1308887-04	1.3090	1.4320		ug/L	9.0		20		J
	MS	1308887-04	1.3090	44.269	40.000	ug/L		107		70 - 130	
	MSD	1308887-04	1.3090	40.446	40.000	ug/L	9.0	97.8	20	70 - 130	
Total Recoverable Lead	DUP	1308887-04	ND	ND		ug/L			20		
	MS	1308887-04	ND	105.71	100.00	ug/L		106		70 - 130	
	MSD	1308887-04	ND	104.00	100.00	ug/L	1.6	104	20	70 - 130	
QC Batch ID: BWE0970	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
Total Recoverable Arsenic	DUP	1308887-11	ND	ND		ug/L			20		
	MS	1308887-11	ND	105.00	100.00	ug/L		105		70 - 130	
	MSD	1308887-11	ND	109.98	100.00	ug/L	4.6	110	20	70 - 130	
Total Recoverable Lead	DUP	1308887-11	ND	ND		ug/L			20		
	MS	1308887-11	ND	102.21	100.00	ug/L		102		70 - 130	
	MSD	1308887-11	ND	107.06	100.00	ug/L	4.6	107	20	70 - 130	
QC Batch ID: BWE1177	Used client sample: N										

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE1177	Used client sample: N										
Total Recoverable Chromium	DUP	1309373-01	0.60700	0.60500		ug/L	0.3		20		J
	MS	1309373-01	0.60700	38.210	40.000	ug/L		94.0		70 - 130	
	MSD	1309373-01	0.60700	40.438	40.000	ug/L	5.7	99.6	20	70 - 130	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 12:18
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A02	The difference between duplicate readings is less than the PQL.
A03	The sample concentration is more than 4 times the spike level.
Q03	Matrix spike recovery(s) is(are) not within the control limits.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/16/2013

David Conner

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Project:	JPL- GW Monitoring Wells
BC Work Order:	1309034
Invoice ID:	B146309

Enclosed are the results of analyses for samples received by the laboratory on 5/2/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.

13-09034

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

Report & Bill to:

Name:	Battelle MHTS	Phone: (614) 458-5489
Address:	505 King Ave.	Project: 2Q13 JPL
City:	Columbus	Project #:
State: OH	ZIP: 43201	Samplers Name: Andy Wolff
Attn:	David Conner	

Analysis Requested

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
-1	TB-9-5/2/13	5-2-13	0700	AQ	X															
-2	MW-13	↓	0835	↓	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
-3	MW-15	↓	0940	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	
-4	MW-9	↓	1115	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	
-5	MW-8	↓	1220	↓	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
-6	MW-7	↓	1400	↓	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
-7	DUP-6-2Q13	↓	1405	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	
-8																				
-11 KIQ																				

CHK BY: KIQ DISTRIBUTION SUB-OUT

SHORT HOLDING TIME: Cr+6 NO2 NO3 OP SS DO Cl2 BOD MBAS COT

Relinquished by: (Signature)	Received By:	Date & Time
[signature]	Nicole	5/2/13 15:30
Relinquished by: (Signature) Nicole	Received by: [signature]	Date & Time 5-2-13 1625
Relinquished by: (Signature) [signature]	Received By: KOR	Date & Time 5-2-13 1945

Chain of Custody and Cooler Receipt Form for 1309034 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 08/17/12 Page 1 Of 1

Submission #: 13-09034

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☑ None ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____	Box ☐ Other ☐ (Specify)_____

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

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☑ Comments:

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

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: Glass Thermometer ID: 207 Date/Time 5-03-13

Temperature: (A) 4.2 °C / (C) 4.1 °C Analyst Init KIQ 1945

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL		B	B	B	B	B	B			
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		C	C	C	C	C	C			
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
P1A PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A(1)									
40ml VOA VIAL	"	A-3	A-3	A-3	A-3	A-3	A-3	"	"	"
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER		D								
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
LEAD										
SPECIAL										

KIQ 5/03/13 @ 2055

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1309034-01	**COC Number:**	---	**Receive Date:**	05/02/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	05/02/2013 07:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-9-5213	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-9-5213	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1309034-02	**COC Number:**	---	**Receive Date:**	05/02/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	05/02/2013 08:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-13	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-13	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1309034-03	**COC Number:**	---	**Receive Date:**	05/02/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:**	05/02/2013 09:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-15	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-15	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1309034-04	**COC Number:**	---	**Receive Date:** 05/02/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:** 05/02/2013 11:15
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-9	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-9
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1309034-05	**COC Number:**	---	**Receive Date:** 05/02/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:** 05/02/2013 12:20
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-8	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-8
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1309034-06	**COC Number:**	---	**Receive Date:** 05/02/2013 19:45
	Project Number:	JPL-GW	**Sampling Date:** 05/02/2013 14:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-7	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-7
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1309034-07

COC Number: ---
Project Number: JPL-GW
Sampling Location: ---
Sampling Point: DUP-6-2Q13
Sampled By: Andy Wolff of BAT

Receive Date: 05/02/2013 19:45
Sampling Date: 05/02/2013 14:05
Sample Depth: ---
Lab Matrix: Water
Sample Type: Aqueous
Delivery Work Order:
Global ID: 0000000000
Location ID (FieldPoint): DUP-6-2Q13
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-01 | **Client Sample Name:** JPL-GW, TB-9-5213, 5/2/2013 7:00:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-01 | **Client Sample Name:** JPL-GW, TB-9-5213, 5/2/2013 7:00:00AM, Andy Wolff

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

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505 King Ave.
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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-01 | **Client Sample Name:** JPL-GW, TB-9-5213, 5/2/2013 7:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 11:49	MGC	MS-V5	1	BWE0250

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309034-01 | **Client Sample Name:** JPL-GW, TB-9-5213, 5/2/2013 7:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 11:49	MGC	MS-V5	1	BWE0250

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-02 | **Client Sample Name:** JPL-GW, MW-13, 5/2/2013 8:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**0.30**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND	**J**	1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**0.34**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND	**J**	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**5.5**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.17**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	**0.34**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND	**J**	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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505 King Ave.
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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-02 | **Client Sample Name:** JPL-GW, MW-13, 5/2/2013 8:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.59**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.15**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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505 King Ave.
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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-02 | **Client Sample Name:** JPL-GW, MW-13, 5/2/2013 8:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 09:34	MGC	MS-V5	1	BWE0250

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309034-02 | **Client Sample Name:** JPL-GW, MW-13, 5/2/2013 8:35:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 09:34	MGC	MS-V5	1	BWE0250

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

BCL Sample ID: 1309034-02 | **Client Sample Name:** JPL-GW, MW-13, 5/2/2013 8:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,4-Dioxane	**2.2**	**ug/L**	**1.0**	**0.38**	**EPA-8270C**	ND		1
Naphthalene-d8 (Surrogate)	98.2	%	75 - 132 (LCL - UCL)		EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	05/07/13	05/10/13 23:53	RDS	MS-B4	0.990	BWE0669

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309034-02 | **Client Sample Name:** JPL-GW, MW-13, 5/2/2013 8:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**68**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**24**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**29**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.15		1
Bicarbonate	**200**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**160**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**59**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**4.4**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**47**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.35**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**410**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**690**	**ug/L**	**200**	**40**	**EPA-314.0**	ND	**A01**	7
ortho-Phosphate as P	**0.050**	**mg/L**	**0.020**	**0.0038**	**EPA-365.1**	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/14/13	05/14/13 18:28	JRG	PE-OP2	1	BWE1054
2	SM-2320B	05/09/13	05/09/13 10:53	FRP	MET-1	1	BWE0792
3	EPA-300.0	05/02/13	05/03/13 00:52	LD1	IC6	1	BWE0235
4	EPA-150.1	05/09/13	05/09/13 10:53	FRP	MET-1	1	BWE0792
5	EPA-160.1	05/03/13	05/03/13 08:10	NW1	MANUAL	2	BWE0246
6	EPA-353.2	05/03/13	05/03/13 09:04	TDC	KONE-1	1	BWE0330
7	EPA-314.0	05/10/13	05/10/13 22:34	LS1	IC6	50	BWE0896
8	EPA-365.1	05/03/13	05/03/13 10:48	TDC	KONE-1	1	BWE0336

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309034-02 | **Client Sample Name:** JPL-GW, MW-13, 5/2/2013 8:35:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0049**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	**0.73**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**14**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**29**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	**0.10**	**ug/L**	**1.0**	**0.10**	**EPA-200.8**	ND	**J**	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 23:35	LS1	KONE-1	1	BWE0324
2	EPA-200.8	05/14/13	05/14/13 18:11	srm	PE-EL1	1	BWE1061
3	EPA-200.7	05/14/13	05/14/13 18:28	JRG	PE-OP2	1	BWE1054

Battelle MHTS
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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-03 | **Client Sample Name:** JPL-GW, MW-15, 5/2/2013 9:40:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-03 | **Client Sample Name:** JPL-GW, MW-15, 5/2/2013 9:40:00AM, Andy Wolff

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

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505 King Ave.
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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-03 | **Client Sample Name:** JPL-GW, MW-15, 5/2/2013 9:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	112	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	94.3	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 12:12	MGC	MS-V5	1	BWE0250

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309034-03 | **Client Sample Name:** JPL-GW, MW-15, 5/2/2013 9:40:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 12:12	MGC	MS-V5	1	BWE0250

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309034-03 | **Client Sample Name:** JPL-GW, MW-15, 5/2/2013 9:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**56**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**19**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**21**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.15		1
Bicarbonate	**220**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**13**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**0.25**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**34**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.56**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**290**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/14/13	05/14/13 18:50	JRG	PE-OP2	1	BWE1054
2	SM-2320B	05/09/13	05/09/13 11:00	FRP	MET-1	1	BWE0792
3	EPA-300.0	05/02/13	05/03/13 01:47	LD1	IC6	1	BWE0235
4	EPA-150.1	05/09/13	05/09/13 11:00	FRP	MET-1	1	BWE0792
5	EPA-160.1	05/03/13	05/03/13 08:10	NW1	MANUAL	2	BWE0246
6	EPA-353.2	05/03/13	05/03/13 09:04	TDC	KONE-1	1	BWE0330
7	EPA-314.0	05/10/13	05/10/13 19:41	LS1	IC6	1	BWE0896

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309034-03 | **Client Sample Name:** JPL-GW, MW-15, 5/2/2013 9:40:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.5**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.52**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 23:35	LS1	KONE-1	1	BWE0324
2	EPA-200.8	05/14/13	05/14/13 18:14	srm	PE-EL1	1	BWE1061
3	EPA-200.7	05/14/13	05/14/13 18:50	JRG	PE-OP2	1	BWE1054

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505 King Ave.
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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-04 | **Client Sample Name:** JPL-GW, MW-9, 5/2/2013 11:15:00AM, Andy Wolff

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

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-04 | **Client Sample Name:** JPL-GW, MW-9, 5/2/2013 11:15:00AM, Andy Wolff

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

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505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-04 | **Client Sample Name:** JPL-GW, MW-9, 5/2/2013 11:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 12:35	MGC	MS-V5	1	BWE0250

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309034-04 | **Client Sample Name:** JPL-GW, MW-9, 5/2/2013 11:15:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 12:35	MGC	MS-V5	1	BWE0250

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309034-04 | **Client Sample Name:** JPL-GW, MW-9, 5/2/2013 11:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**52**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**17**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**20**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.15		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**180**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**12**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**0.058**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND	**J**	3
Sulfate	**29**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.36**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**250**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/14/13	05/14/13 18:53	JRG	PE-OP2	1	BWE1054
2	SM-2320B	05/09/13	05/09/13 11:06	FRP	MET-1	1	BWE0792
3	EPA-300.0	05/02/13	05/03/13 02:00	LD1	IC6	1	BWE0235
4	EPA-150.1	05/09/13	05/09/13 11:06	FRP	MET-1	1	BWE0792
5	EPA-160.1	05/03/13	05/03/13 08:10	NW1	MANUAL	2	BWE0246
6	EPA-353.2	05/03/13	05/03/13 09:04	TDC	KONE-1	1	BWE0330
7	EPA-314.0	05/10/13	05/10/13 19:54	LS1	IC6	1	BWE0896

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309034-04 | **Client Sample Name:** JPL-GW, MW-9, 5/2/2013 11:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.0**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.71**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**32**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 23:35	LS1	KONE-1	1	BWE0324
2	EPA-200.8	05/14/13	05/14/13 18:18	srm	PE-EL1	1	BWE1061
3	EPA-200.7	05/14/13	05/14/13 18:53	JRG	PE-OP2	1	BWE1054

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-05 | **Client Sample Name:** JPL-GW, MW-8, 5/2/2013 12:20:00PM, Andy Wolff

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

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-05 | **Client Sample Name:** JPL-GW, MW-8, 5/2/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
Trichlorofluoromethane	**0.63**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-05 | **Client Sample Name:** JPL-GW, MW-8, 5/2/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 12:57	MGC	MS-V5	1	BWE0250

Battelle MHTS
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Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309034-05 | **Client Sample Name:** JPL-GW, MW-8, 5/2/2013 12:20:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 12:57	MGC	MS-V5	1	BWE0250

Battelle MHTS
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Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309034-05 | **Client Sample Name:** JPL-GW, MW-8, 5/2/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**51**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**17**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**21**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.7**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.15		1
Bicarbonate	**230**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**12**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**0.29**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**22**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.57**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**270**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7
ortho-Phosphate as P	**0.0061**	**mg/L**	**0.020**	**0.0038**	**EPA-365.1**	ND	**J**	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/14/13	05/14/13 18:55	JRG	PE-OP2	1	BWE1054
2	SM-2320B	05/09/13	05/09/13 11:13	FRP	MET-1	1	BWE0792
3	EPA-300.0	05/02/13	05/03/13 02:14	LD1	IC6	1	BWE0235
4	EPA-150.1	05/09/13	05/09/13 11:13	FRP	MET-1	1	BWE0792
5	EPA-160.1	05/03/13	05/03/13 08:10	NW1	MANUAL	2	BWE0246
6	EPA-353.2	05/03/13	05/03/13 09:04	TDC	KONE-1	1	BWE0330
7	EPA-314.0	05/10/13	05/10/13 20:08	LS1	IC6	1	BWE0896
8	EPA-365.1	05/03/13	05/03/13 10:48	TDC	KONE-1	1	BWE0336

Battelle MHTS
505 King Ave.
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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309034-05 | **Client Sample Name:** JPL-GW, MW-8, 5/2/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**0.88**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**0.70**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	ND	ug/L	50	6.5	EPA-200.7	ND		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 23:35	LS1	KONE-1	1	BWE0324
2	EPA-200.8	05/14/13	05/14/13 18:21	srm	PE-EL1	1	BWE1061
3	EPA-200.7	05/14/13	05/14/13 18:55	JRG	PE-OP2	1	BWE1054

Battelle MHTS
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Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-06 | **Client Sample Name:** JPL-GW, MW-7, 5/2/2013 2:00:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**2.9**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**1.0**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**9.5**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	**0.19**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND	**J**	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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505 King Ave.
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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-06 | **Client Sample Name:** JPL-GW, MW-7, 5/2/2013 2:00:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.9**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.11**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-06 | **Client Sample Name:** JPL-GW, MW-7, 5/2/2013 2:00:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.8	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 13:20	MGC	MS-V5	1	BWE0250

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309034-06 | **Client Sample Name:** JPL-GW, MW-7, 5/2/2013 2:00:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 13:20	MGC	MS-V5	1	BWE0250

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309034-06 | **Client Sample Name:** JPL-GW, MW-7, 5/2/2013 2:00:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**72**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**24**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**40**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**4.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.15		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**190**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**65**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**1.4**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**39**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.38**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**400**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**260**	**ug/L**	**80**	**16**	**EPA-314.0**	ND	**A01**	7
ortho-Phosphate as P	**0.010**	**mg/L**	**0.020**	**0.0038**	**EPA-365.1**	ND	**J**	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/14/13	05/14/13 18:58	JRG	PE-OP2	1	BWE1054
2	SM-2320B	05/09/13	05/09/13 11:19	FRP	MET-1	1	BWE0792
3	EPA-300.0	05/02/13	05/03/13 02:27	LD1	IC6	1	BWE0235
4	EPA-150.1	05/09/13	05/09/13 11:19	FRP	MET-1	1	BWE0792
5	EPA-160.1	05/03/13	05/03/13 08:10	NW1	MANUAL	2	BWE0246
6	EPA-353.2	05/03/13	05/03/13 09:04	TDC	KONE-1	1	BWE0330
7	EPA-314.0	05/10/13	05/10/13 23:01	LS1	IC6	20	BWE0896
8	EPA-365.1	05/03/13	05/03/13 10:48	TDC	KONE-1	1	BWE0336

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309034-06 | **Client Sample Name:** JPL-GW, MW-7, 5/2/2013 2:00:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.014**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	**0.88**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**16**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**8.1**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 23:35	LS1	KONE-1	1	BWE0324
2	EPA-200.8	05/14/13	05/14/13 18:24	srm	PE-EL1	1	BWE1061
3	EPA-200.7	05/14/13	05/14/13 18:58	JRG	PE-OP2	1	BWE1054

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-07 | **Client Sample Name:** JPL-GW, DUP-6-2Q13, 5/2/2013 2:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**3.0**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**1.0**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**9.8**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	**0.19**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND	**J**	1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-07 | **Client Sample Name:** JPL-GW, DUP-6-2Q13, 5/2/2013 2:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.9**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**0.12**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309034-07 | **Client Sample Name:** JPL-GW, DUP-6-2Q13, 5/2/2013 2:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	92.4	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 13:42	MGC	MS-V5	1	BWE0250

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309034-07 | **Client Sample Name:** JPL-GW, DUP-6-2Q13, 5/2/2013 2:05:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/03/13	05/03/13 13:42	MGC	MS-V5	1	BWE0250

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309034-07 | **Client Sample Name:** JPL-GW, DUP-6-2Q13, 5/2/2013 2:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**70**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**24**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**39**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**4.0**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.15		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**66**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.14		3
Nitrate as N	**1.3**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**40**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.65**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**410**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**260**	**ug/L**	**80**	**16**	**EPA-314.0**	ND	**A01**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/14/13	05/14/13 19:00	JRG	PE-OP2	1	BWE1054
2	SM-2320B	05/09/13	05/09/13 16:27	FRP	MET-1	1	BWE0793
3	EPA-300.0	05/02/13	05/03/13 03:08	LD1	IC6	1	BWE0235
4	EPA-150.1	05/09/13	05/09/13 16:27	FRP	MET-1	1	BWE0793
5	EPA-160.1	05/03/13	05/03/13 08:10	NW1	MANUAL	2	BWE0246
6	EPA-353.2	05/03/13	05/03/13 09:09	TDC	KONE-1	1	BWE0330
7	EPA-314.0	05/14/13	05/15/13 00:06	LS1	IC6	20	BWE1111

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309034-07 | **Client Sample Name:** JPL-GW, DUP-6-2Q13, 5/2/2013 2:05:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.013**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	**0.87**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	**17**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**14**	**ug/L**	**50**	**6.5**	**EPA-200.7**	ND	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/02/13	05/02/13 23:38	LS1	KONE-1	1	BWE0324
2	EPA-200.8	05/14/13	05/14/13 18:27	srm	PE-EL1	1	BWE1061
3	EPA-200.7	05/14/13	05/14/13 19:00	JRG	PE-OP2	1	BWE1054

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0250						
Benzene	BWE0250-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWE0250-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWE0250-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWE0250-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWE0250-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWE0250-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWE0250-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWE0250-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWE0250-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWE0250-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWE0250-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWE0250-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWE0250-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWE0250-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWE0250-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWE0250-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BWE0250-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWE0250-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWE0250-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWE0250-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWE0250-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWE0250-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWE0250-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWE0250-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWE0250-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWE0250-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWE0250-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWE0250-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWE0250-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWE0250-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWE0250-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWE0250-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWE0250-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWE0250-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: BWE0250						
trans-1,3-Dichloropropene	BWE0250-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWE0250-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWE0250-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWE0250-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWE0250-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWE0250-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWE0250-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWE0250-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWE0250-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWE0250-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWE0250-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWE0250-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWE0250-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWE0250-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWE0250-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWE0250-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BWE0250-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWE0250-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWE0250-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWE0250-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWE0250-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWE0250-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWE0250-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWE0250-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWE0250-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWE0250-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWE0250-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWE0250-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWE0250-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWE0250-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWE0250-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWE0250-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWE0250-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWE0250-BLK1	ND	ug/L	4.0	0.97	

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Project: JPL- GW Monitoring Wells
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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: BWE0250						
Ethyl t-butyl ether	BWE0250-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWE0250-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWE0250-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWE0250-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWE0250-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWE0250-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWE0250-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWE0250-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWE0250-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWE0250-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWE0250-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWE0250-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWE0250-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWE0250-BLK1	105	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWE0250-BLK1	104	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWE0250-BLK1	91.3	%	80 - 120 (LCL - UCL)		

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0250										
Benzene	BWE0250-BS1	LCS	25.790	25.000	ug/L	103		70 - 130		
Bromodichloromethane	BWE0250-BS1	LCS	25.870	25.000	ug/L	103		70 - 130		
Chlorobenzene	BWE0250-BS1	LCS	24.660	25.000	ug/L	98.6		70 - 130		
Chloroethane	BWE0250-BS1	LCS	27.580	25.000	ug/L	110		70 - 130		
1,4-Dichlorobenzene	BWE0250-BS1	LCS	24.030	25.000	ug/L	96.1		70 - 130		
1,1-Dichloroethane	BWE0250-BS1	LCS	24.450	25.000	ug/L	97.8		70 - 130		
1,1-Dichloroethene	BWE0250-BS1	LCS	25.690	25.000	ug/L	103		70 - 130		
Toluene	BWE0250-BS1	LCS	25.840	25.000	ug/L	103		70 - 130		
Trichloroethene	BWE0250-BS1	LCS	24.760	25.000	ug/L	99.0		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWE0250-BS1	LCS	10.320	10.000	ug/L	103		75 - 125		
Toluene-d8 (Surrogate)	BWE0250-BS1	LCS	10.420	10.000	ug/L	104		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWE0250-BS1	LCS	9.9700	10.000	ug/L	99.7		80 - 120		

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0250	Used client sample: Y - Description: MW-13, 05/02/2013 08:35										
Benzene	MS	1309034-02	ND	26.130	25.000	ug/L		105		70 - 130	
	MSD	1309034-02	ND	25.110	25.000	ug/L	4.0	100	20	70 - 130	
Bromodichloromethane	MS	1309034-02	0.30000	27.130	25.000	ug/L		107		70 - 130	
	MSD	1309034-02	0.30000	26.030	25.000	ug/L	4.1	103	20	70 - 130	
Chlorobenzene	MS	1309034-02	ND	25.120	25.000	ug/L		100		70 - 130	
	MSD	1309034-02	ND	24.340	25.000	ug/L	3.2	97.4	20	70 - 130	
Chloroethane	MS	1309034-02	ND	26.940	25.000	ug/L		108		70 - 130	
	MSD	1309034-02	ND	26.380	25.000	ug/L	2.1	106	20	70 - 130	
1,4-Dichlorobenzene	MS	1309034-02	ND	26.660	25.000	ug/L		107		70 - 130	
	MSD	1309034-02	ND	25.180	25.000	ug/L	5.7	101	20	70 - 130	
1,1-Dichloroethane	MS	1309034-02	0.17000	24.810	25.000	ug/L		98.6		70 - 130	
	MSD	1309034-02	0.17000	24.060	25.000	ug/L	3.1	95.6	20	70 - 130	
1,1-Dichloroethene	MS	1309034-02	0.34000	26.300	25.000	ug/L		104		70 - 130	
	MSD	1309034-02	0.34000	24.950	25.000	ug/L	5.3	98.4	20	70 - 130	
Toluene	MS	1309034-02	ND	26.060	25.000	ug/L		104		70 - 130	
	MSD	1309034-02	ND	24.710	25.000	ug/L	5.3	98.8	20	70 - 130	
Trichloroethene	MS	1309034-02	0.15000	25.350	25.000	ug/L		101		70 - 130	
	MSD	1309034-02	0.15000	24.160	25.000	ug/L	4.8	96.0	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1309034-02	ND	10.110	10.000	ug/L		101		75 - 125	
	MSD	1309034-02	ND	10.320	10.000	ug/L	2.1	103		75 - 125	
Toluene-d8 (Surrogate)	MS	1309034-02	ND	10.300	10.000	ug/L		103		80 - 120	
	MSD	1309034-02	ND	10.050	10.000	ug/L	2.5	100		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1309034-02	ND	10.190	10.000	ug/L		102		80 - 120	
	MSD	1309034-02	ND	9.9300	10.000	ug/L	2.6	99.3		80 - 120	

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505 King Ave.
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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0250						
Chloroacetonitrile	BWE0250-BLK1	0	ug/L			
1-Chlorobutane	BWE0250-BLK1	0	ug/L			
1,1-Dichloropropanone	BWE0250-BLK1	0	ug/L			
Methyl acrylate	BWE0250-BLK1	0	ug/L			
Nitrobenzene	BWE0250-BLK1	0	ug/L			
2-Nitropropane	BWE0250-BLK1	0	ug/L			

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0669						
1,4-Dioxane	BWE0669-BLK1	ND	ug/L	1.0	0.38	
Naphthalene-d8 (Surrogate)	BWE0669-BLK1	91.8	%	75 - 132 (LCL - UCL)		

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BWE0669										
1,4-Dioxane	BWE0669-BS1	LCS	48.403	50.000	ug/L	96.8		70 - 130		
Naphthalene-d8 (Surrogate)	BWE0669-BS1	LCS	36.912	40.000	ug/L	92.3		75 - 132		

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Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BWE0669	Used client sample: N										
1,4-Dioxane	MS	1308130-58	ND	49.750	50.000	ug/L		99.5		70 - 130	
	MSD	1308130-58	ND	50.954	50.000	ug/L	2.4	102	30	70 - 130	
Naphthalene-d8 (Surrogate)	MS	1308130-58	ND	40.970	40.000	ug/L		102		75 - 132	
	MSD	1308130-58	ND	40.692	40.000	ug/L	0.7	102		75 - 132	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0235						
Chloride	BWE0235-BLK1	0.14300	mg/L	0.50	0.067	J
Nitrate as N	BWE0235-BLK1	ND	mg/L	0.10	0.025	
Sulfate	BWE0235-BLK1	ND	mg/L	1.0	0.18	
QC Batch ID: BWE0246						
Total Dissolved Solids @ 180 C	BWE0246-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWE0330						
Nitrite as N	BWE0330-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWE0336						
ortho-Phosphate as P	BWE0336-BLK1	ND	mg/L	0.020	0.0038	
QC Batch ID: BWE0792						
Bicarbonate	BWE0792-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0792-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0792-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0793						
Bicarbonate	BWE0793-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0793-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0793-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0896						
Perchlorate	BWE0896-BLK1	ND	ug/L	4.0	0.81	
QC Batch ID: BWE1054						
Total Recoverable Calcium	BWE1054-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE1054-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE1054-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE1054-BLK1	0.15134	mg/L	1.0	0.10	J
QC Batch ID: BWE1111						
Perchlorate	BWE1111-BLK1	ND	ug/L	4.0	0.81	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0235										
Chloride	BWE0235-BS1	LCS	51.370	50.000	mg/L	103		90 - 110		
Nitrate as N	BWE0235-BS1	LCS	5.0770	5.0000	mg/L	102		90 - 110		
Sulfate	BWE0235-BS1	LCS	102.13	100.00	mg/L	102		90 - 110		
QC Batch ID: BWE0246										
Total Dissolved Solids @ 180 C	BWE0246-BS1	LCS	565.00	586.00	mg/L	96.4		90 - 110		
QC Batch ID: BWE0330										
Nitrite as N	BWE0330-BS1	LCS	0.48839	0.50000	mg/L	97.7		90 - 110		
QC Batch ID: BWE0336										
ortho-Phosphate as P	BWE0336-BS1	LCS	0.20240	0.20000	mg/L	101		90 - 110		
QC Batch ID: BWE0792										
Total Alkalinity as CaCO3	BWE0792-BS3	LCS	97.970	100.00	mg/L	98.0		90 - 110		
pH	BWE0792-BS2	LCS	7.0900	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0793										
Total Alkalinity as CaCO3	BWE0793-BS3	LCS	98.730	100.00	mg/L	98.7		90 - 110		
pH	BWE0793-BS2	LCS	7.0700	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0896										
Perchlorate	BWE0896-BS1	LCS	9.6696	10.000	ug/L	96.7		85 - 115		
QC Batch ID: BWE1054										
Total Recoverable Calcium	BWE1054-BS1	LCS	10.636	10.000	mg/L	106		85 - 115		
Total Recoverable Magnesium	BWE1054-BS1	LCS	10.938	10.000	mg/L	109		85 - 115		
Total Recoverable Sodium	BWE1054-BS1	LCS	10.115	10.000	mg/L	101		85 - 115		
Total Recoverable Potassium	BWE1054-BS1	LCS	10.028	10.000	mg/L	100		85 - 115		
QC Batch ID: BWE1111										
Perchlorate	BWE1111-BS1	LCS	10.871	10.000	ug/L	109		85 - 115		

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0235	Used client sample: Y - Description: MW-13, 05/02/2013 08:35										
Chloride	DUP	1309034-02	58.619	58.777		mg/L	0.3		10		
	MS	1309034-02	58.619	109.49	50.505	mg/L		101		80 - 120	
	MSD	1309034-02	58.619	109.39	50.505	mg/L	0.1	101	10	80 - 120	
Nitrate as N	DUP	1309034-02	4.3610	4.3840		mg/L	0.5		10		
	MS	1309034-02	4.3610	9.5646	5.0505	mg/L		103		80 - 120	
	MSD	1309034-02	4.3610	9.5505	5.0505	mg/L	0.1	103	10	80 - 120	
Sulfate	DUP	1309034-02	47.282	47.180		mg/L	0.2		10		
	MS	1309034-02	47.282	154.56	101.01	mg/L		106		80 - 120	
	MSD	1309034-02	47.282	154.46	101.01	mg/L	0.1	106	10	80 - 120	
QC Batch ID: BWE0246	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1309037-01	945.00	945.00		mg/L	0		10		
QC Batch ID: BWE0330	Used client sample: Y - Description: MW-13, 05/02/2013 08:35										
Nitrite as N	DUP	1309034-02	ND	ND		mg/L			10		
	MS	1309034-02	ND	0.51844	0.52632	mg/L		98.5		90 - 110	
	MSD	1309034-02	ND	0.52854	0.52632	mg/L	1.9	100	10	90 - 110	
QC Batch ID: BWE0336	Used client sample: Y - Description: MW-13, 05/02/2013 08:35										
ortho-Phosphate as P	DUP	1309034-02	0.049743	0.049548		mg/L	0.4		10		
	MS	1309034-02	0.049743	0.26829	0.21053	mg/L		104		90 - 110	
	MSD	1309034-02	0.049743	0.26853	0.21053	mg/L	0.1	104	10	90 - 110	
QC Batch ID: BWE0792	Used client sample: N										
Bicarbonate	DUP	1309541-01	2548.3	2566.8		mg/L	0.7		10		
Carbonate	DUP	1309541-01	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1309541-01	2090.0	2105.2		mg/L	0.7		10		
pH	DUP	1309541-01	6.8100	6.8000		pH Units	0.1		20		
QC Batch ID: BWE0793	Used client sample: Y - Description: DUP-6-2Q13, 05/02/2013 14:05										
Bicarbonate	DUP	1309034-07	239.10	239.28		mg/L	0.1		10		
Carbonate	DUP	1309034-07	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1309034-07	196.10	196.25		mg/L	0.1		10		
pH	DUP	1309034-07	7.6500	7.5800		pH Units	0.9		20		
QC Batch ID: BWE0896	Used client sample: Y - Description: MW-21-2, 05/01/2013 12:40										
Perchlorate	DUP	1308887-11	2.5067	2.2877		ug/L	9.1		15		J
	MS	1308887-11	2.5067	11.152	10.101	ug/L		85.6		80 - 120	
	MSD	1308887-11	2.5067	11.917	10.101	ug/L	6.6	93.2	15	80 - 120	
QC Batch ID: BWE1054	Used client sample: Y - Description: MW-13, 05/02/2013 08:35										

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE1054	Used client sample: Y - Description: MW-13, 05/02/2013 08:35										
Total Recoverable Calcium	DUP	1309034-02	68.335	66.791		mg/L	2.3		20		
	MS	1309034-02	68.335	77.347	10.000	mg/L		90.1		75 - 125	
	MSD	1309034-02	68.335	76.662	10.000	mg/L	0.9	83.3	20	75 - 125	
Total Recoverable Magnesium	DUP	1309034-02	23.734	23.179		mg/L	2.4		20		
	MS	1309034-02	23.734	33.986	10.000	mg/L		103		75 - 125	
	MSD	1309034-02	23.734	33.526	10.000	mg/L	1.4	97.9	20	75 - 125	
Total Recoverable Sodium	DUP	1309034-02	29.177	28.982		mg/L	0.7		20		
	MS	1309034-02	29.177	39.041	10.000	mg/L		98.6		75 - 125	
	MSD	1309034-02	29.177	38.817	10.000	mg/L	0.6	96.4	20	75 - 125	
Total Recoverable Potassium	DUP	1309034-02	3.0896	3.0496		mg/L	1.3		20		
	MS	1309034-02	3.0896	13.056	10.000	mg/L		99.7		75 - 125	
	MSD	1309034-02	3.0896	13.045	10.000	mg/L	0.1	99.6	20	75 - 125	
QC Batch ID: BWE1111	Used client sample: N										
Perchlorate	DUP	1309414-01	ND	ND		ug/L			15		
	MS	1309414-01	ND	9.4046	10.101	ug/L		93.1		80 - 120	
	MSD	1309414-01	ND	10.359	10.101	ug/L	9.7	103	15	80 - 120	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0324						
Hexavalent Chromium	BWE0324-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWE1054						
Total Recoverable Iron	BWE1054-BLK1	ND	ug/L	50	6.5	
QC Batch ID: BWE1061						
Total Recoverable Arsenic	BWE1061-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE1061-BLK1	ND	ug/L	3.0	0.50	
Total Recoverable Lead	BWE1061-BLK1	ND	ug/L	1.0	0.10	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0324										
Hexavalent Chromium	BWE0324-BS1	LCS	0.049188	0.050000	mg/L	98.4		85 - 115		
QC Batch ID: BWE1054										
Total Recoverable Iron	BWE1054-BS1	LCS	1083.6	1000.0	ug/L	108		85 - 115		
QC Batch ID: BWE1061										
Total Recoverable Arsenic	BWE1061-BS1	LCS	99.930	100.00	ug/L	99.9		85 - 115		
Total Recoverable Chromium	BWE1061-BS1	LCS	43.067	40.000	ug/L	108		85 - 115		
Total Recoverable Lead	BWE1061-BS1	LCS	105.20	100.00	ug/L	105		85 - 115		

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0324	Used client sample: Y - Description: MW-13, 05/02/2013 08:35										
Hexavalent Chromium	DUP	1309034-02	0.0048940	0.0047850		mg/L	2.3		10		
	MS	1309034-02	0.0048940	0.054177	0.052632	mg/L		93.6		85 - 115	
	MSD	1309034-02	0.0048940	0.054017	0.052632	mg/L	0.3	93.3	10	85 - 115	
QC Batch ID: BWE1054	Used client sample: Y - Description: MW-13, 05/02/2013 08:35										
Total Recoverable Iron	DUP	1309034-02	29.323	27.417		ug/L	6.7		20		J
	MS	1309034-02	29.323	1111.9	1000.0	ug/L		108		75 - 125	
	MSD	1309034-02	29.323	1121.9	1000.0	ug/L	0.9	109	20	75 - 125	
QC Batch ID: BWE1061	Used client sample: N										
Total Recoverable Arsenic	DUP	1309300-01	2.2810	2.0580		ug/L	10.3		20		
	MS	1309300-01	2.2810	103.75	100.00	ug/L		101		70 - 130	
	MSD	1309300-01	2.2810	101.53	100.00	ug/L	2.2	99.2	20	70 - 130	
Total Recoverable Chromium	DUP	1309300-01	ND	ND		ug/L			20		
	MS	1309300-01	ND	40.641	40.000	ug/L		102		70 - 130	
	MSD	1309300-01	ND	38.508	40.000	ug/L	5.4	96.3	20	70 - 130	
Total Recoverable Lead	DUP	1309300-01	ND	ND		ug/L			20		
	MS	1309300-01	ND	103.31	100.00	ug/L		103		70 - 130	
	MSD	1309300-01	ND	98.073	100.00	ug/L	5.2	98.1	20	70 - 130	

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/16/2013 13:49
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/22/2013

David Conner

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Project:	JPL- GW Monitoring Wells
BC Work Order:	1309146
Invoice ID:	B146748

Enclosed are the results of analyses for samples received by the laboratory on 5/3/2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Misty Orton
Client Service Rep

Authorized Signature

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1309146

BC Laboratories, Inc.

4100 Atlas Ct
Bakersfield, CA 93308
(661)327-4911
(661) 327-4911

Chain of Custody

Report & Bill to:

Name:	Battelle MHTS	Phone: (614) 458-5489
Address:	505 King Ave.	Project: 2Q13 JPL
City:	Columbus	Project #:
State: OH	ZIP: 43201	Samplers Name: Andy Wolff
Attn:	David Conner	

Analysis Requested

Lab #	Sample Description	Date Sampled	Time Sampled	Matrix	VOCs (524.2)	Total Cr (200.8)	Perchlorate (CADHS/ EPA 314.0)	Lead (200.8)	Arsenic (200.8)	Ca, Mg, K, Na, and Fe (200.8)	Alkalinity (SM2320B)	Bicarbonate and Carbonate (SM2320B)	Chloride, Nitrate as N, Sulfate (300.0)	Nitrite as N (353.2)	Total Dissolved Solids (SM2540C)	pH (150.1)	Orthophosphate (365.1)	1-4 Dioxane (8270C SIM)	Hexavalent Cr (7196A)	NOTES
-1	TB-10-5/3/13	5-3-13	0600	AQ	X															
-2	MW-6	↓	0710	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	
-3	MW-1	↓	0905	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	
-4	MW-16	↓	1100	↓	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
-5	MW-10	↓	1220	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	
-6	MW-5	↓	1315	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	
-7	DUP-7-2Q13	↓	0715	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	
-8	DUP-8-2Q13	↓	0910	↓	X	X	X	X	X	X	X	X	X	X	X	X			X	

CHK BY: MP DISTRIBUTION: MA MT SLM JKR
SUB-OUT ☐

Relinquished by: (Signature)	Received By:	Date & Time
Andy Wolff	Nicole	5/3/13 15[30]
Nicole	[signature]	5/3/13 1615
[signature]	SAS	5/3/13 5/3/13 1915

SHORT HOLDING TIME
Cr+6 (circled) NO2 (circled) NO3 (circled) OP (circled) SS
DO Cl_2 BOD MBAS COT

Chain of Custody and Cooler Receipt Form for 1309146 Page 2 of 2

: LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 13 08/17/12 Page 1 Of 1

ubmission#: 1309146

SHIPPING INFORMATION	SHIPPING CONTAINER
deral Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☑ None ☐
C Lab Field Service ☑ Other ☐ (Specify)_____	Box ☐ Other ☐ (Specify)_____

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

ustody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments:

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

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: Pt PE Thermometer ID: 207 Date/Time 5/3/13 1915

Temperature: (A) 1.2 °C / (C) 1.1 °C Analyst Init SAS

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
GENERAL MINERAL/ GENERAL PHYSICAL		B	B	B	B	B	B	B		
PE UNPRESERVED										
INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS		C	C	C	C	C	C	C		
CYANIDE										
NITROGEN FORMS										
TOTAL SULFIDE										
NITRATE / NITRITE										
TOTAL ORGANIC CARBON										
TOX										
CHEMICAL OXYGEN DEMAND										
PHENOLICS										
ml VOA VIAL TRAVEL BLANK	A 1									
ml VOA VIAL	A 1	A 3	A 3	A 3	A 3	A 3	A 3	A 3	A 3	A 3
EPA 413.1, 413.2, 418.1										
ODOR										
BIOLOGICAL										
CTERIOLOGICAL										
ml VOA VIAL- 504										
EPA 508/608/8080										
EPA 515.1/8150										
EPA 525										
EPA 525 TRAVEL BLANK										
ml EPA 547										
ml EPA 531.1										
EPA 548										
EPA 549										
EPA 632										
EPA 8015M										
AMBER (8270) [8270]				D						
Z. JAR										
OZ. JAR										
IL SLEEVE										
B VIAL										
ASTIC BAG										
RROUS IRON										
CORE										
ART KIT										

nments:_____

nple Numbering Completed By: SAS Date/Time: 5/3/13 2130 5/5/13

Actual / C = Corrected

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1309146-01	**COC Number:**	---	**Receive Date:**	05/03/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:**	05/03/2013 06:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	TB-10-5313	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): TB-10-5313	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1309146-02	**COC Number:**	---	**Receive Date:**	05/03/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:**	05/03/2013 07:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-6	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-6	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1309146-03	**COC Number:**	---	**Receive Date:**	05/03/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:**	05/03/2013 09:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-1	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): MW-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1309146-04	**COC Number:**	---	**Receive Date:** 05/03/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 05/03/2013 11:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-16	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-16
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1309146-05	**COC Number:**	---	**Receive Date:** 05/03/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 05/03/2013 12:20
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-10	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-10
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1309146-06	**COC Number:**	---	**Receive Date:** 05/03/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:** 05/03/2013 13:15
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-5	**Lab Matrix:** Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:** Aqueous
			Delivery Work Order:
			Global ID: 0000000000
			Location ID (FieldPoint): MW-5
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

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Project Number: 2Q13 JPL
Project Manager: David Conner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1309146-07	**COC Number:**	---	**Receive Date:**	05/03/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:**	05/03/2013 07:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-7-2Q13	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-7-2Q13	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1309146-08	**COC Number:**	---	**Receive Date:**	05/03/2013 19:15
	Project Number:	JPL-GW	**Sampling Date:**	05/03/2013 09:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DUP-8-2Q13	**Lab Matrix:**	Water
	Sampled By:	Andy Wolff of BAT	**Sample Type:**	Aqueous
			Delivery Work Order:	
			Global ID: 0000000000	
			Location ID (FieldPoint): DUP-8-2Q13	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-01 | **Client Sample Name:** JPL-GW, TB-10-5313, 5/3/2013 6:00:00AM, Andy Wolff

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

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-01 | **Client Sample Name:** JPL-GW, TB-10-5313, 5/3/2013 6:00:00AM, Andy Wolff

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

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-01 | **Client Sample Name:** JPL-GW, TB-10-5313, 5/3/2013 6:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.1	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 14:53	MGC	MS-V5	1	BWE0369

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309146-01 | **Client Sample Name:** JPL-GW, TB-10-5313, 5/3/2013 6:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 14:53	MGC	MS-V5	1	BWE0369

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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-02 | **Client Sample Name:** JPL-GW, MW-6, 5/3/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND	V11	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.73**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.27**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	**0.29**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND	**J**	1
cis-1,2-Dichloroethene	**0.090**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	**0.22**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-02 | **Client Sample Name:** JPL-GW, MW-6, 5/3/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.2**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**4.1**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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Project: JPL- GW Monitoring Wells
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Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-02 | **Client Sample Name:** JPL-GW, MW-6, 5/3/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	88.2	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 11:53	MGC	MS-V5	1	BWE0369

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309146-02 | **Client Sample Name:** JPL-GW, MW-6, 5/3/2013 7:10:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 11:53	MGC	MS-V5	1	BWE0369

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309146-02 | **Client Sample Name:** JPL-GW, MW-6, 5/3/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**140**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**46**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**47**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.27		1
Bicarbonate	**240**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**130**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.17		3
Nitrate as N	**12**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**200**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.29**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**760**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.2**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/15/13	05/15/13 18:03	JRG	PE-OP2	1	BWE1176
2	SM-2320B	05/09/13	05/09/13 18:07	FRP	MET-1	2	BWE0794
3	EPA-300.0	05/03/13	05/04/13 00:36	LD1	IC2	1	BWE0358
4	EPA-150.1	05/09/13	05/09/13 18:07	FRP	MET-1	1	BWE0794
5	EPA-160.1	05/06/13	05/06/13 08:00	NW1	MANUAL	3.333	BWE0374
6	EPA-353.2	05/03/13	05/03/13 23:42	LS1	KONE-1	1	BWE0527
7	EPA-314.0	05/11/13	05/13/13 12:41	LD1	IC6	1	BWE0898

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309146-02 | **Client Sample Name:** JPL-GW, MW-6, 5/3/2013 7:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0016**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**5.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**78**	**ug/L**	**50**	**6.5**	**EPA-200.7**	10		3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/03/13	05/03/13 22:52	LS1	KONE-1	1	BWE0529
2	EPA-200.8	05/16/13	05/16/13 22:24	JSS	PE-EL1	1	BWE1269
3	EPA-200.7	05/15/13	05/15/13 18:03	JRG	PE-OP2	1	BWE1176
4	EPA-200.8	05/21/13	05/22/13 00:48	JSS	PE-EL1	1	BWE1588

Battelle MHTS
505 King Ave.
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-03 | **Client Sample Name:** JPL-GW, MW-1, 5/3/2013 9:05:00AM, Andy Wolff

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

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-03 | **Client Sample Name:** JPL-GW, MW-1, 5/3/2013 9:05:00AM, Andy Wolff

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

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-03 | **Client Sample Name:** JPL-GW, MW-1, 5/3/2013 9:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	91.0	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 12:16	MGC	MS-V5	1	BWE0369

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309146-03 | **Client Sample Name:** JPL-GW, MW-1, 5/3/2013 9:05:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 12:16	MGC	MS-V5	1	BWE0369

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309146-03 | **Client Sample Name:** JPL-GW, MW-1, 5/3/2013 9:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**55**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**17**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**28**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.27		1
Bicarbonate	**260**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**13**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.17		3
Nitrate as N	**0.097**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND	**J**	3
Sulfate	**29**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.97**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**270**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/15/13	05/15/13 18:18	JRG	PE-OP2	1	BWE1176
2	SM-2320B	05/09/13	05/09/13 18:12	FRP	MET-1	1	BWE0794
3	EPA-300.0	05/03/13	05/03/13 23:42	LS1	IC2	1	BWE0358
4	EPA-150.1	05/09/13	05/09/13 18:12	FRP	MET-1	1	BWE0794
5	EPA-160.1	05/06/13	05/06/13 08:00	NW1	MANUAL	2	BWE0374
6	EPA-353.2	05/03/13	05/03/13 23:42	LS1	KONE-1	1	BWE0527
7	EPA-314.0	05/11/13	05/13/13 16:06	LD1	IC6	1	BWE0898

Battelle MHTS
505 King Ave.
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309146-03 | **Client Sample Name:** JPL-GW, MW-1, 5/3/2013 9:05:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.4**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**8.2**	**ug/L**	**50**	**6.5**	**EPA-200.7**	10	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/03/13	05/03/13 22:52	LS1	KONE-1	1	BWE0529
2	EPA-200.8	05/16/13	05/16/13 22:27	JSS	PE-EL1	1	BWE1269
3	EPA-200.7	05/15/13	05/15/13 18:18	JRG	PE-OP2	1	BWE1176
4	EPA-200.8	05/21/13	05/22/13 00:51	JSS	PE-EL1	1	BWE1588

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Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-04 | **Client Sample Name:** JPL-GW, MW-16, 5/3/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	**9.6**	**ug/L**	**0.50**	**0.14**	**EPA-524.2**	ND		1
Bromoform	**4.8**	**ug/L**	**0.50**	**0.27**	**EPA-524.2**	ND	**V11**	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	**0.27**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND	**J**	1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**9.0**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	**8.7**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-04 | **Client Sample Name:** JPL-GW, MW-16, 5/3/2013 11:00:00AM, Andy Wolff

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

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-04 | **Client Sample Name:** JPL-GW, MW-16, 5/3/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 12:38	MGC	MS-V5	1	BWE0369

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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309146-04 | **Client Sample Name:** JPL-GW, MW-16, 5/3/2013 11:00:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 12:38	MGC	MS-V5	1	BWE0369

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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

1,4-Dioxane (EPA Method 8270C)

BCL Sample ID: 1309146-04 | **Client Sample Name:** JPL-GW, MW-16, 5/3/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,4-Dioxane	ND	ug/L	1.0	0.38	EPA-8270C	ND		1
Naphthalene-d8 (Surrogate)	101	%	75 - 132 (LCL - UCL)		EPA-8270C			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C	05/07/13	05/11/13 00:14	RDS	MS-B4	1	BWE0669

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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309146-04 | **Client Sample Name:** JPL-GW, MW-16, 5/3/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**63**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**21**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**36**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.5**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.27		1
Bicarbonate	**210**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**170**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**67**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.17		3
Nitrate as N	**1.4**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**40**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.77**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**380**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7
ortho-Phosphate as P	**0.23**	**mg/L**	**0.020**	**0.0038**	**EPA-365.1**	ND		8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/15/13	05/15/13 18:27	JRG	PE-OP2	1	BWE1176
2	SM-2320B	05/09/13	05/09/13 18:18	FRP	MET-1	1	BWE0794
3	EPA-300.0	05/03/13	05/04/13 00:50	LD1	IC2	1	BWE0358
4	EPA-150.1	05/09/13	05/09/13 18:18	FRP	MET-1	1	BWE0794
5	EPA-160.1	05/06/13	05/06/13 08:00	NW1	MANUAL	2	BWE0374
6	EPA-353.2	05/03/13	05/03/13 23:42	LS1	KONE-1	1	BWE0527
7	EPA-314.0	05/11/13	05/13/13 16:19	LD1	IC6	1	BWE0898
8	EPA-365.1	05/03/13	05/03/13 23:50	LS1	KONE-1	1	BWE0528

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Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309146-04 | **Client Sample Name:** JPL-GW, MW-16, 5/3/2013 11:00:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0099**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	**4.8**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND		2
Total Recoverable Chromium	**14**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**26**	**ug/L**	**50**	**6.5**	**EPA-200.7**	10	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/03/13	05/03/13 22:52	LS1	KONE-1	1	BWE0529
2	EPA-200.8	05/16/13	05/16/13 22:30	JSS	PE-EL1	1	BWE1269
3	EPA-200.7	05/15/13	05/15/13 18:27	JRG	PE-OP2	1	BWE1176
4	EPA-200.8	05/21/13	05/22/13 00:54	JSS	PE-EL1	1	BWE1588

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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-05 | **Client Sample Name:** JPL-GW, MW-10, 5/3/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND	V11	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**1.1**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.20**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
cis-1,2-Dichloroethene	**0.10**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-05 | **Client Sample Name:** JPL-GW, MW-10, 5/3/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**0.82**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**7.4**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-05 | **Client Sample Name:** JPL-GW, MW-10, 5/3/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	88.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 15:16	MGC	MS-V5	1	BWE0369

Battelle MHTS
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309146-05 | **Client Sample Name:** JPL-GW, MW-10, 5/3/2013 12:20:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 15:16	MGC	MS-V5	1	BWE0369

Battelle MHTS
505 King Ave.
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309146-05 | **Client Sample Name:** JPL-GW, MW-10, 5/3/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**120**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**39**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**33**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.27		1
Bicarbonate	**240**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**92**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.17		3
Nitrate as N	**11**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**140**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.38**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**620**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**8.2**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/15/13	05/15/13 18:30	JRG	PE-OP2	1	BWE1176
2	SM-2320B	05/09/13	05/09/13 18:23	FRP	MET-1	1	BWE0794
3	EPA-300.0	05/03/13	05/04/13 01:04	LD1	IC2	1	BWE0358
4	EPA-150.1	05/09/13	05/09/13 18:23	FRP	MET-1	1	BWE0794
5	EPA-160.1	05/06/13	05/06/13 08:00	NW1	MANUAL	3.333	BWE0374
6	EPA-353.2	05/03/13	05/03/13 23:42	LS1	KONE-1	1	BWE0527
7	EPA-314.0	05/11/13	05/13/13 16:33	LD1	IC6	1	BWE0898

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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309146-05 | **Client Sample Name:** JPL-GW, MW-10, 5/3/2013 12:20:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0039**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**5.2**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND		2
Total Recoverable Iron	**32**	**ug/L**	**50**	**6.5**	**EPA-200.7**	10	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/03/13	05/03/13 22:53	LS1	KONE-1	1	BWE0529
2	EPA-200.8	05/16/13	05/16/13 22:33	JSS	PE-EL1	1	BWE1269
3	EPA-200.7	05/15/13	05/15/13 18:30	JRG	PE-OP2	1	BWE1176
4	EPA-200.8	05/21/13	05/22/13 00:57	JSS	PE-EL1	1	BWE1588

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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-06 | **Client Sample Name:** JPL-GW, MW-5, 5/3/2013 1:15:00PM, Andy Wolff

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

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505 King Ave.
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-06 | **Client Sample Name:** JPL-GW, MW-5, 5/3/2013 1:15:00PM, Andy Wolff

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

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505 King Ave.
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-06 | **Client Sample Name:** JPL-GW, MW-5, 5/3/2013 1:15:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	89.5	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 15:39	MGC	MS-V5	1	BWE0369

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309146-06 | **Client Sample Name:** JPL-GW, MW-5, 5/3/2013 1:15:00PM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 15:39	MGC	MS-V5	1	BWE0369

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309146-06 | **Client Sample Name:** JPL-GW, MW-5, 5/3/2013 1:15:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**61**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**19**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**19**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.6**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.27		1
Bicarbonate	**270**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**220**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**7.0**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.17		3
Nitrate as N	**1.9**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**21**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.41**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**290**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/15/13	05/15/13 18:32	JRG	PE-OP2	1	BWE1176
2	SM-2320B	05/09/13	05/09/13 18:29	FRP	MET-1	1	BWE0794
3	EPA-300.0	05/03/13	05/04/13 01:17	LD1	IC2	1	BWE0358
4	EPA-150.1	05/09/13	05/09/13 18:29	FRP	MET-1	1	BWE0794
5	EPA-160.1	05/06/13	05/06/13 08:00	NW1	MANUAL	2	BWE0374
6	EPA-353.2	05/03/13	05/03/13 23:42	LS1	KONE-1	1	BWE0527
7	EPA-314.0	05/11/13	05/13/13 16:59	LD1	IC6	1	BWE0898

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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309146-06 | **Client Sample Name:** JPL-GW, MW-5, 5/3/2013 1:15:00PM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**16**	**ug/L**	**50**	**6.5**	**EPA-200.7**	10	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/03/13	05/03/13 22:53	LS1	KONE-1	1	BWE0529
2	EPA-200.8	05/16/13	05/16/13 22:36	JSS	PE-EL1	1	BWE1269
3	EPA-200.7	05/15/13	05/15/13 18:32	JRG	PE-OP2	1	BWE1176
4	EPA-200.8	05/21/13	05/22/13 01:00	JSS	PE-EL1	1	BWE1588

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-07 | **Client Sample Name:** JPL-GW, DUP-7-2Q13, 5/3/2013 7:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-524.2	ND		1
Bromobenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Bromochloromethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
Bromodichloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Bromoform	ND	ug/L	0.50	0.27	EPA-524.2	ND	V11	1
Bromomethane	ND	ug/L	1.0	0.25	EPA-524.2	ND	V11	1
n-Butylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
sec-Butylbenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
tert-Butylbenzene	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
Carbon tetrachloride	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Chlorobenzene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
Chloroethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
Chloroform	**0.78**	**ug/L**	**0.50**	**0.12**	**EPA-524.2**	ND		1
Chloromethane	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
2-Chlorotoluene	ND	ug/L	0.50	0.20	EPA-524.2	ND		1
4-Chlorotoluene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
Dibromochloromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-524.2	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Dibromomethane	ND	ug/L	0.50	0.24	EPA-524.2	ND		1
1,2-Dichlorobenzene	ND	ug/L	0.50	0.072	EPA-524.2	ND		1
1,3-Dichlorobenzene	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,4-Dichlorobenzene	ND	ug/L	0.50	0.062	EPA-524.2	ND		1
Dichlorodifluoromethane	ND	ug/L	0.50	0.099	EPA-524.2	ND		1
1,1-Dichloroethane	**0.29**	**ug/L**	**0.50**	**0.11**	**EPA-524.2**	ND	**J**	1
1,2-Dichloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
1,1-Dichloroethene	**0.29**	**ug/L**	**0.50**	**0.18**	**EPA-524.2**	ND	**J**	1
cis-1,2-Dichloroethene	**0.10**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND	**J**	1
trans-1,2-Dichloroethene	**0.23**	**ug/L**	**0.50**	**0.15**	**EPA-524.2**	ND	**J**	1
1,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,3-Dichloropropane	ND	ug/L	0.50	0.086	EPA-524.2	ND		1
2,2-Dichloropropane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,1-Dichloropropene	ND	ug/L	0.50	0.085	EPA-524.2	ND		1

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505 King Ave.
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-07 | **Client Sample Name:** JPL-GW, DUP-7-2Q13, 5/3/2013 7:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
trans-1,3-Dichloropropene	ND	ug/L	0.50	0.079	EPA-524.2	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-524.2	ND		1
Hexachlorobutadiene	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Isopropylbenzene	ND	ug/L	0.50	0.14	EPA-524.2	ND		1
p-Isopropyltoluene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Methylene chloride	ND	ug/L	0.50	0.48	EPA-524.2	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Naphthalene	ND	ug/L	0.50	0.36	EPA-524.2	ND		1
n-Propylbenzene	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
Styrene	ND	ug/L	0.50	0.068	EPA-524.2	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	0.17	EPA-524.2	ND		1
Tetrachloroethene	**1.2**	**ug/L**	**0.50**	**0.13**	**EPA-524.2**	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-524.2	ND		1
1,2,3-Trichlorobenzene	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	0.50	0.19	EPA-524.2	ND		1
1,1,1-Trichloroethane	ND	ug/L	0.50	0.11	EPA-524.2	ND		1
1,1,2-Trichloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND		1
Trichloroethene	**4.0**	**ug/L**	**0.50**	**0.085**	**EPA-524.2**	ND		1
Trichlorofluoromethane	ND	ug/L	0.50	0.13	EPA-524.2	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-524.2	ND		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50	0.15	EPA-524.2	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Vinyl chloride	ND	ug/L	0.50	0.12	EPA-524.2	ND		1
Acetone	ND	ug/L	10	4.6	EPA-524.2	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-524.2	ND		1
Allyl chloride	ND	ug/L	5.0	0.80	EPA-524.2	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-524.2	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-524.2	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-524.2	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-524.2	ND		1

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505 King Ave.
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-07 | **Client Sample Name:** JPL-GW, DUP-7-2Q13, 5/3/2013 7:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	90.9	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 16:01	MGC	MS-V5	1	BWE0369

Battelle MHTS
505 King Ave.
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309146-07 | **Client Sample Name:** JPL-GW, DUP-7-2Q13, 5/3/2013 7:15:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 16:01	MGC	MS-V5	1	BWE0369

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309146-07 | **Client Sample Name:** JPL-GW, DUP-7-2Q13, 5/3/2013 7:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**140**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**46**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**46**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**2.8**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.27		1
Bicarbonate	**240**	**mg/L**	**10**	**10**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	5.0	5.0	SM-2320B	ND		2
Total Alkalinity as CaCO3	**200**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		2
Chloride	**130**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.17		3
Nitrate as N	**12**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**200**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.29**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**780**	**mg/L**	**33**	**33**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	**3.5**	**ug/L**	**4.0**	**0.81**	**EPA-314.0**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/15/13	05/15/13 18:35	JRG	PE-OP2	1	BWE1176
2	SM-2320B	05/09/13	05/09/13 18:35	FRP	MET-1	2	BWE0794
3	EPA-300.0	05/03/13	05/04/13 01:58	LD1	IC2	1	BWE0358
4	EPA-150.1	05/09/13	05/09/13 18:35	FRP	MET-1	1	BWE0794
5	EPA-160.1	05/06/13	05/06/13 08:35	NW1	MANUAL	3.333	BWE0375
6	EPA-353.2	05/03/13	05/03/13 23:46	LS1	KONE-1	1	BWE0527
7	EPA-314.0	05/11/13	05/13/13 17:13	LD1	IC6	1	BWE0898

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505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309146-07 | **Client Sample Name:** JPL-GW, DUP-7-2Q13, 5/3/2013 7:15:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	**0.0014**	**mg/L**	**0.0020**	**0.00070**	**EPA-7196**	ND	**J**	1
Total Recoverable Arsenic	ND	ug/L	2.0	0.70	EPA-200.8	ND		2
Total Recoverable Chromium	**1.1**	**ug/L**	**3.0**	**0.50**	**EPA-200.8**	ND	**J**	2
Total Recoverable Iron	**37**	**ug/L**	**50**	**6.5**	**EPA-200.7**	10	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/03/13	05/03/13 22:56	LS1	KONE-1	1	BWE0529
2	EPA-200.8	05/16/13	05/16/13 22:39	JSS	PE-EL1	1	BWE1269
3	EPA-200.7	05/15/13	05/15/13 18:35	JRG	PE-OP2	1	BWE1176
4	EPA-200.8	05/21/13	05/22/13 01:03	JSS	PE-EL1	1	BWE1588

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505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-08 | **Client Sample Name:** JPL-GW, DUP-8-2Q13, 5/3/2013 9:10:00AM, Andy Wolff

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

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505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-08 | **Client Sample Name:** JPL-GW, DUP-8-2Q13, 5/3/2013 9:10:00AM, Andy Wolff

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

Battelle MHTS
505 King Ave.
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2)

BCL Sample ID: 1309146-08 | **Client Sample Name:** JPL-GW, DUP-8-2Q13, 5/3/2013 9:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diethyl ether	ND	ug/L	2.0	0.21	EPA-524.2	ND		1
Ethyl methacrylate	ND	ug/L	4.0	0.97	EPA-524.2	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-524.2	ND		1
Hexachloroethane	ND	ug/L	0.50	0.16	EPA-524.2	ND	V11	1
2-Hexanone	ND	ug/L	10	3.4	EPA-524.2	ND		1
Methacrylonitrile	ND	ug/L	10	1.7	EPA-524.2	ND		1
Methyl ethyl ketone	ND	ug/L	10	2.5	EPA-524.2	ND		1
Methyl iodide	ND	ug/L	2.0	0.47	EPA-524.2	ND		1
Methyl isobutyl ketone	ND	ug/L	10	2.1	EPA-524.2	ND		1
Methyl methacrylate	ND	ug/L	5.0	1.5	EPA-524.2	ND		1
Pentachloroethane	ND	ug/L	2.0	0.43	EPA-524.2	ND		1
Propionitrile	ND	ug/L	20	4.2	EPA-524.2	ND		1
Tetrahydrofuran	ND	ug/L	20	5.2	EPA-524.2	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-524.2	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-524.2	ND		1
1,2-Dichloroethane-d4 (Surrogate)	111	%	75 - 125 (LCL - UCL)		EPA-524.2			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-524.2			1
4-Bromofluorobenzene (Surrogate)	88.6	%	80 - 120 (LCL - UCL)		EPA-524.2			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 16:24	MGC	MS-V5	1	BWE0369

Battelle MHTS
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Volatile Organic Analysis (EPA Method 524.2) TICs

BCL Sample ID: 1309146-08 | **Client Sample Name:** JPL-GW, DUP-8-2Q13, 5/3/2013 9:10:00AM, Andy Wolff

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

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-524.2	05/06/13	05/06/13 16:24	MGC	MS-V5	1	BWE0369

Battelle MHTS
505 King Ave.
Columbus, OH 43201

Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Water Analysis (General Chemistry)

BCL Sample ID: 1309146-08 | **Client Sample Name:** JPL-GW, DUP-8-2Q13, 5/3/2013 9:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Recoverable Calcium	**55**	**mg/L**	**0.10**	**0.018**	**EPA-200.7**	ND		1
Total Recoverable Magnesium	**17**	**mg/L**	**0.050**	**0.020**	**EPA-200.7**	ND		1
Total Recoverable Sodium	**28**	**mg/L**	**0.50**	**0.17**	**EPA-200.7**	ND		1
Total Recoverable Potassium	**3.1**	**mg/L**	**1.0**	**0.10**	**EPA-200.7**	0.27		1
Bicarbonate	**260**	**mg/L**	**5.0**	**5.0**	**SM-2320B**	ND		2
Carbonate	ND	mg/L	2.5	2.5	SM-2320B	ND		2
Total Alkalinity as CaCO3	**210**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		2
Chloride	**13**	**mg/L**	**0.50**	**0.067**	**EPA-300.0**	0.17		3
Nitrate as N	**0.11**	**mg/L**	**0.10**	**0.025**	**EPA-300.0**	ND		3
Sulfate	**29**	**mg/L**	**1.0**	**0.18**	**EPA-300.0**	ND		3
pH	**7.77**	**pH Units**	**0.05**	**0.05**	**EPA-150.1**		**S05**	4
Total Dissolved Solids @ 180 C	**290**	**mg/L**	**20**	**20**	**EPA-160.1**	ND		5
Nitrite as N	ND	mg/L	0.050	0.012	EPA-353.2	ND		6
Perchlorate	ND	ug/L	4.0	0.81	EPA-314.0	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-200.7	05/15/13	05/15/13 18:37	JRG	PE-OP2	1	BWE1176
2	SM-2320B	05/09/13	05/09/13 19:28	FRP	MET-1	1	BWE0795
3	EPA-300.0	05/03/13	05/04/13 02:12	LD1	IC2	1	BWE0358
4	EPA-150.1	05/09/13	05/09/13 19:28	FRP	MET-1	1	BWE0795
5	EPA-160.1	05/06/13	05/06/13 08:35	NW1	MANUAL	2	BWE0375
6	EPA-353.2	05/03/13	05/03/13 23:46	LS1	KONE-1	1	BWE0527
7	EPA-314.0	05/11/13	05/13/13 17:39	LD1	IC6	1	BWE0898

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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
Project Manager: David Conner

Metals Analysis

BCL Sample ID: 1309146-08 | **Client Sample Name:** JPL-GW, DUP-8-2Q13, 5/3/2013 9:10:00AM, Andy Wolff

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Hexavalent Chromium	ND	mg/L	0.0020	0.00070	EPA-7196	ND		1
Total Recoverable Arsenic	**1.1**	**ug/L**	**2.0**	**0.70**	**EPA-200.8**	ND	**J**	2
Total Recoverable Chromium	ND	ug/L	3.0	0.50	EPA-200.8	ND		2
Total Recoverable Iron	**7.5**	**ug/L**	**50**	**6.5**	**EPA-200.7**	10	**J**	3
Total Recoverable Lead	ND	ug/L	1.0	0.10	EPA-200.8	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/03/13	05/03/13 22:56	LS1	KONE-1	1	BWE0529
2	EPA-200.8	05/16/13	05/16/13 22:42	JSS	PE-EL1	1	BWE1269
3	EPA-200.7	05/15/13	05/15/13 18:37	JRG	PE-OP2	1	BWE1176
4	EPA-200.8	05/21/13	05/22/13 01:06	JSS	PE-EL1	1	BWE1588

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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0369						
Benzene	BWE0369-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BWE0369-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BWE0369-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BWE0369-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BWE0369-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BWE0369-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BWE0369-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BWE0369-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BWE0369-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BWE0369-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BWE0369-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BWE0369-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BWE0369-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BWE0369-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BWE0369-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BWE0369-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BWE0369-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BWE0369-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BWE0369-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BWE0369-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BWE0369-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BWE0369-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BWE0369-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BWE0369-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BWE0369-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BWE0369-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BWE0369-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BWE0369-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BWE0369-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BWE0369-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BWE0369-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BWE0369-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BWE0369-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BWE0369-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: BWE0369						
trans-1,3-Dichloropropene	BWE0369-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BWE0369-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BWE0369-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BWE0369-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BWE0369-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BWE0369-BLK1	ND	ug/L	0.50	0.48	
Methyl t-butyl ether	BWE0369-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BWE0369-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BWE0369-BLK1	ND	ug/L	0.50	0.11	
Styrene	BWE0369-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BWE0369-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BWE0369-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BWE0369-BLK1	ND	ug/L	0.50	0.13	
Toluene	BWE0369-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BWE0369-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BWE0369-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BWE0369-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BWE0369-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BWE0369-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BWE0369-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BWE0369-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BWE0369-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BWE0369-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BWE0369-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BWE0369-BLK1	ND	ug/L	0.50	0.12	
Acetone	BWE0369-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BWE0369-BLK1	ND	ug/L	5.0	1.2	
Allyl chloride	BWE0369-BLK1	ND	ug/L	5.0	0.80	
t-Amyl Methyl ether	BWE0369-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BWE0369-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BWE0369-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BWE0369-BLK1	ND	ug/L	5.0	1.4	
Diethyl ether	BWE0369-BLK1	ND	ug/L	2.0	0.21	
Ethyl methacrylate	BWE0369-BLK1	ND	ug/L	4.0	0.97	

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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: BWE0369						
Ethyl t-butyl ether	BWE0369-BLK1	ND	ug/L	0.50	0.18	
Hexachloroethane	BWE0369-BLK1	ND	ug/L	0.50	0.16	
2-Hexanone	BWE0369-BLK1	ND	ug/L	10	3.4	
Methacrylonitrile	BWE0369-BLK1	ND	ug/L	10	1.7	
Methyl ethyl ketone	BWE0369-BLK1	ND	ug/L	10	2.5	
Methyl iodide	BWE0369-BLK1	ND	ug/L	2.0	0.47	
Methyl isobutyl ketone	BWE0369-BLK1	ND	ug/L	10	2.1	
Methyl methacrylate	BWE0369-BLK1	ND	ug/L	5.0	1.5	
Pentachloroethane	BWE0369-BLK1	ND	ug/L	2.0	0.43	
Propionitrile	BWE0369-BLK1	ND	ug/L	20	4.2	
Tetrahydrofuran	BWE0369-BLK1	ND	ug/L	20	5.2	
p- & m-Xylenes	BWE0369-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BWE0369-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	BWE0369-BLK1	112	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BWE0369-BLK1	101	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BWE0369-BLK1	92.2	%	80 - 120 (LCL - UCL)		

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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0369										
Benzene	BWE0369-BS1	LCS	26.840	25.000	ug/L	107		70 - 130		
Bromodichloromethane	BWE0369-BS1	LCS	25.980	25.000	ug/L	104		70 - 130		
Chlorobenzene	BWE0369-BS1	LCS	25.420	25.000	ug/L	102		70 - 130		
Chloroethane	BWE0369-BS1	LCS	28.030	25.000	ug/L	112		70 - 130		
1,4-Dichlorobenzene	BWE0369-BS1	LCS	26.250	25.000	ug/L	105		70 - 130		
1,1-Dichloroethane	BWE0369-BS1	LCS	25.400	25.000	ug/L	102		70 - 130		
1,1-Dichloroethene	BWE0369-BS1	LCS	26.400	25.000	ug/L	106		70 - 130		
Toluene	BWE0369-BS1	LCS	26.140	25.000	ug/L	105		70 - 130		
Trichloroethene	BWE0369-BS1	LCS	24.910	25.000	ug/L	99.6		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BWE0369-BS1	LCS	10.360	10.000	ug/L	104		75 - 125		
Toluene-d8 (Surrogate)	BWE0369-BS1	LCS	10.340	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	BWE0369-BS1	LCS	10.150	10.000	ug/L	102		80 - 120		

Battelle MHTS
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Reported: 05/22/2013 17:43
Project: JPL- GW Monitoring Wells
Project Number: 2Q13 JPL
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: BWE0369	Used client sample: Y - Description: MW-1, 05/03/2013 09:05										
Benzene	MS	1309146-03	ND	27.080	25.000	ug/L		108		70 - 130	
	MSD	1309146-03	ND	26.790	25.000	ug/L	1.1	107	20	70 - 130	
Bromodichloromethane	MS	1309146-03	ND	26.010	25.000	ug/L		104		70 - 130	
	MSD	1309146-03	ND	26.050	25.000	ug/L	0.2	104	20	70 - 130	
Chlorobenzene	MS	1309146-03	ND	25.810	25.000	ug/L		103		70 - 130	
	MSD	1309146-03	ND	25.020	25.000	ug/L	3.1	100	20	70 - 130	
Chloroethane	MS	1309146-03	ND	29.460	25.000	ug/L		118		70 - 130	
	MSD	1309146-03	ND	28.620	25.000	ug/L	2.9	114	20	70 - 130	
1,4-Dichlorobenzene	MS	1309146-03	ND	26.880	25.000	ug/L		108		70 - 130	
	MSD	1309146-03	ND	26.380	25.000	ug/L	1.9	106	20	70 - 130	
1,1-Dichloroethane	MS	1309146-03	ND	26.090	25.000	ug/L		104		70 - 130	
	MSD	1309146-03	ND	25.690	25.000	ug/L	1.5	103	20	70 - 130	
1,1-Dichloroethene	MS	1309146-03	ND	26.840	25.000	ug/L		107		70 - 130	
	MSD	1309146-03	ND	26.400	25.000	ug/L	1.7	106	20	70 - 130	
Toluene	MS	1309146-03	ND	26.180	25.000	ug/L		105		70 - 130	
	MSD	1309146-03	ND	25.290	25.000	ug/L	3.5	101	20	70 - 130	
Trichloroethene	MS	1309146-03	ND	24.760	25.000	ug/L		99.0		70 - 130	
	MSD	1309146-03	ND	24.360	25.000	ug/L	1.6	97.4	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1309146-03	ND	10.360	10.000	ug/L		104		75 - 125	
	MSD	1309146-03	ND	10.800	10.000	ug/L	4.2	108		75 - 125	
Toluene-d8 (Surrogate)	MS	1309146-03	ND	10.250	10.000	ug/L		102		80 - 120	
	MSD	1309146-03	ND	10.120	10.000	ug/L	1.3	101		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1309146-03	ND	10.290	10.000	ug/L		103		80 - 120	
	MSD	1309146-03	ND	10.180	10.000	ug/L	1.1	102		80 - 120	

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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: BWE0369						
Chloroacetonitrile	BWE0369-BLK1	0	ug/L			
1-Chlorobutane	BWE0369-BLK1	0	ug/L			
1,1-Dichloropropanone	BWE0369-BLK1	0	ug/L			
Methyl acrylate	BWE0369-BLK1	0	ug/L			
Nitrobenzene	BWE0369-BLK1	0	ug/L			
2-Nitropropane	BWE0369-BLK1	0	ug/L			

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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0669						
1,4-Dioxane	BWE0669-BLK1	ND	ug/L	1.0	0.38	
Naphthalene-d8 (Surrogate)	BWE0669-BLK1	91.8	%	75 - 132 (LCL - UCL)		

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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BWE0669										
1,4-Dioxane	BWE0669-BS1	LCS	48.403	50.000	ug/L	96.8		70 - 130		
Naphthalene-d8 (Surrogate)	BWE0669-BS1	LCS	36.912	40.000	ug/L	92.3		75 - 132		

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1,4-Dioxane (EPA Method 8270C)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BWE0669	Used client sample: N										
1,4-Dioxane	MS	1308130-58	ND	49.750	50.000	ug/L		99.5		70 - 130	
	MSD	1308130-58	ND	50.954	50.000	ug/L	2.4	102	30	70 - 130	
Naphthalene-d8 (Surrogate)	MS	1308130-58	ND	40.970	40.000	ug/L		102		75 - 132	
	MSD	1308130-58	ND	40.692	40.000	ug/L	0.7	102		75 - 132	

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BWE0358						
Chloride	BWE0358-BLK1	0.17100	mg/L	0.50	0.067	J
Nitrate as N	BWE0358-BLK1	ND	mg/L	0.10	0.025	
Sulfate	BWE0358-BLK1	ND	mg/L	1.0	0.18	
QC Batch ID: BWE0374						
Total Dissolved Solids @ 180 C	BWE0374-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWE0375						
Total Dissolved Solids @ 180 C	BWE0375-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BWE0527						
Nitrite as N	BWE0527-BLK1	ND	mg/L	0.050	0.012	
QC Batch ID: BWE0528						
ortho-Phosphate as P	BWE0528-BLK1	ND	mg/L	0.020	0.0038	
QC Batch ID: BWE0794						
Bicarbonate	BWE0794-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0794-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0794-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0795						
Bicarbonate	BWE0795-BLK1	ND	mg/L	5.0	5.0	
Carbonate	BWE0795-BLK1	ND	mg/L	2.5	2.5	
Total Alkalinity as CaCO3	BWE0795-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BWE0898						
Perchlorate	BWE0898-BLK1	ND	ug/L	4.0	0.81	
QC Batch ID: BWE1176						
Total Recoverable Calcium	BWE1176-BLK1	ND	mg/L	0.10	0.018	
Total Recoverable Magnesium	BWE1176-BLK1	ND	mg/L	0.050	0.020	
Total Recoverable Sodium	BWE1176-BLK1	ND	mg/L	0.50	0.17	
Total Recoverable Potassium	BWE1176-BLK1	0.26526	mg/L	1.0	0.10	J

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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: BWE0358										
Chloride	BWE0358-BS1	LCS	51.452	50.000	mg/L	103		90 - 110		
Nitrate as N	BWE0358-BS1	LCS	5.0850	5.0000	mg/L	102		90 - 110		
Sulfate	BWE0358-BS1	LCS	102.31	100.00	mg/L	102		90 - 110		
QC Batch ID: BWE0374										
Total Dissolved Solids @ 180 C	BWE0374-BS1	LCS	555.00	586.00	mg/L	94.7		90 - 110		
QC Batch ID: BWE0375										
Total Dissolved Solids @ 180 C	BWE0375-BS1	LCS	575.00	586.00	mg/L	98.1		90 - 110		
QC Batch ID: BWE0527										
Nitrite as N	BWE0527-BS1	LCS	0.50509	0.50000	mg/L	101		90 - 110		
QC Batch ID: BWE0528										
ortho-Phosphate as P	BWE0528-BS1	LCS	0.20078	0.20000	mg/L	100		90 - 110		
QC Batch ID: BWE0794										
Total Alkalinity as CaCO3	BWE0794-BS3	LCS	99.490	100.00	mg/L	99.5		90 - 110		
pH	BWE0794-BS2	LCS	7.0700	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0795										
Total Alkalinity as CaCO3	BWE0795-BS3	LCS	99.650	100.00	mg/L	99.6		90 - 110		
pH	BWE0795-BS2	LCS	7.0700	7.0000	pH Units	101		95 - 105		
QC Batch ID: BWE0898										
Perchlorate	BWE0898-BS1	LCS	10.201	10.000	ug/L	102		85 - 115		
QC Batch ID: BWE1176										
Total Recoverable Calcium	BWE1176-BS1	LCS	9.8670	10.000	mg/L	98.7		85 - 115		
Total Recoverable Magnesium	BWE1176-BS1	LCS	9.9717	10.000	mg/L	99.7		85 - 115		
Total Recoverable Sodium	BWE1176-BS1	LCS	9.3551	10.000	mg/L	93.6		85 - 115		
Total Recoverable Potassium	BWE1176-BS1	LCS	9.4140	10.000	mg/L	94.1		85 - 115		

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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: BWE0358	Used client sample: Y - Description: MW-1, 05/03/2013 09:05										
Chloride	DUP	1309146-03	12.997	12.930		mg/L	0.5		10		
	MS	1309146-03	12.997	66.917	50.505	mg/L		107		80 - 120	
	MSD	1309146-03	12.997	66.968	50.505	mg/L	0.1	107	10	80 - 120	
Nitrate as N	DUP	1309146-03	0.097000	0.10300		mg/L	6.0		10		
	MS	1309146-03	0.097000	5.1838	5.0505	mg/L		101		80 - 120	
	MSD	1309146-03	0.097000	5.2889	5.0505	mg/L	2.0	103	10	80 - 120	
Sulfate	DUP	1309146-03	29.429	29.330		mg/L	0.3		10		
	MS	1309146-03	29.429	138.84	101.01	mg/L		108		80 - 120	
	MSD	1309146-03	29.429	138.41	101.01	mg/L	0.3	108	10	80 - 120	
QC Batch ID: BWE0374	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1309080-01	676.66	686.66		mg/L	1.5		10		
QC Batch ID: BWE0375	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1308633-01	1780.0	1750.0		mg/L	1.7		10		
QC Batch ID: BWE0527	Used client sample: Y - Description: MW-6, 05/03/2013 07:10										
Nitrite as N	DUP	1309146-02	ND	ND		mg/L			10		
	MS	1309146-02	ND	0.52769	0.52632	mg/L		100		90 - 110	
	MSD	1309146-02	ND	0.53071	0.52632	mg/L	0.6	101	10	90 - 110	
QC Batch ID: BWE0528	Used client sample: Y - Description: MW-6, 05/03/2013 07:10										
ortho-Phosphate as P	DUP	1309146-02	0.061755	0.061233		mg/L	0.8		10		
	MS	1309146-02	0.061755	0.28105	0.21053	mg/L		104		90 - 110	
	MSD	1309146-02	0.061755	0.28163	0.21053	mg/L	0.2	104	10	90 - 110	
QC Batch ID: BWE0794	Used client sample: N										
Bicarbonate	DUP	1309061-01	192.17	192.35		mg/L	0.1		10		
Carbonate	DUP	1309061-01	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1309061-01	157.61	157.76		mg/L	0.1		10		
pH	DUP	1309061-01	8.2400	8.2700		pH Units	0.4		20		
QC Batch ID: BWE0795	Used client sample: N										
Bicarbonate	DUP	1309647-01	110.93	114.26		mg/L	3.0		10		
Carbonate	DUP	1309647-01	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1309647-01	90.980	93.710		mg/L	3.0		10		
pH	DUP	1309647-01	8.2400	8.2500		pH Units	0.1		20		
QC Batch ID: BWE0898	Used client sample: Y - Description: MW-6, 05/03/2013 07:10										
Perchlorate	DUP	1309146-02	3.1782	3.2804		ug/L	3.2		15		J
	MS	1309146-02	3.1782	12.787	10.101	ug/L		95.1		80 - 120	
	MSD	1309146-02	3.1782	12.940	10.101	ug/L	1.2	96.6	15	80 - 120	

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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: BWE1176	Used client sample: Y - Description: MW-6, 05/03/2013 07:10										
Total Recoverable Calcium	DUP	1309146-02	136.58	135.78		mg/L	0.6		20		
	MS	1309146-02	136.58	145.34	10.000	mg/L		87.7		75 - 125	
	MSD	1309146-02	136.58	145.08	10.000	mg/L	0.2	85.0	20	75 - 125	
Total Recoverable Magnesium	DUP	1309146-02	45.927	46.455		mg/L	1.1		20		
	MS	1309146-02	45.927	56.066	10.000	mg/L		101		75 - 125	
	MSD	1309146-02	45.927	55.904	10.000	mg/L	0.3	99.8	20	75 - 125	
Total Recoverable Sodium	DUP	1309146-02	46.718	45.599		mg/L	2.4		20		
	MS	1309146-02	46.718	55.175	10.000	mg/L		84.6		75 - 125	
	MSD	1309146-02	46.718	56.118	10.000	mg/L	1.7	94.0	20	75 - 125	
Total Recoverable Potassium	DUP	1309146-02	2.8469	2.8686		mg/L	0.8		20		
	MS	1309146-02	2.8469	12.717	10.000	mg/L		98.7		75 - 125	
	MSD	1309146-02	2.8469	12.659	10.000	mg/L	0.5	98.1	20	75 - 125	

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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: BWE0529						
Hexavalent Chromium	BWE0529-BLK1	ND	mg/L	0.0020	0.00070	
QC Batch ID: BWE1176						
Total Recoverable Iron	BWE1176-BLK1	10.209	ug/L	50	6.5	J
QC Batch ID: BWE1269						
Total Recoverable Arsenic	BWE1269-BLK1	ND	ug/L	2.0	0.70	
Total Recoverable Chromium	BWE1269-BLK1	ND	ug/L	3.0	0.50	
QC Batch ID: BWE1588						
Total Recoverable Lead	BWE1588-BLK1	ND	ug/L	1.0	0.10	

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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: BWE0529										
Hexavalent Chromium	BWE0529-BS1	LCS	0.051615	0.050000	mg/L	103		85 - 115		
QC Batch ID: BWE1176										
Total Recoverable Iron	BWE1176-BS1	LCS	1022.5	1000.0	ug/L	102		85 - 115		
QC Batch ID: BWE1269										
Total Recoverable Arsenic	BWE1269-BS1	LCS	100.16	100.00	ug/L	100		85 - 115		
Total Recoverable Chromium	BWE1269-BS1	LCS	40.478	40.000	ug/L	101		85 - 115		
QC Batch ID: BWE1588										
Total Recoverable Lead	BWE1588-BS1	LCS	101.29	100.00	ug/L	101		85 - 115		

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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: BWE0529	Used client sample: Y - Description: MW-6, 05/03/2013 07:10										
Hexavalent Chromium	DUP	1309146-02	0.0016260	0.0015230		mg/L	6.5		10		J
	MS	1309146-02	0.0016260	0.052142	0.052632	mg/L		96.0		85 - 115	
	MSD	1309146-02	0.0016260	0.052219	0.052632	mg/L	0.1	96.1	10	85 - 115	
QC Batch ID: BWE1176	Used client sample: Y - Description: MW-6, 05/03/2013 07:10										
Total Recoverable Iron	DUP	1309146-02	77.536	78.364		ug/L	1.1		20		
	MS	1309146-02	77.536	1113.7	1000.0	ug/L		104		75 - 125	
	MSD	1309146-02	77.536	1123.3	1000.0	ug/L	0.9	105	20	75 - 125	
QC Batch ID: BWE1269	Used client sample: N										
Total Recoverable Arsenic	DUP	1309416-02	ND	ND		ug/L			20		
	MS	1309416-02	ND	99.849	100.00	ug/L		99.8		70 - 130	
	MSD	1309416-02	ND	97.802	100.00	ug/L	2.1	97.8	20	70 - 130	
Total Recoverable Chromium	DUP	1309416-02	ND	ND		ug/L			20		
	MS	1309416-02	ND	33.469	40.000	ug/L		83.7		70 - 130	
	MSD	1309416-02	ND	33.892	40.000	ug/L	1.3	84.7	20	70 - 130	
QC Batch ID: BWE1588	Used client sample: N										
Total Recoverable Lead	DUP	1309684-01	1.3390	1.4020		ug/L	4.6		20		
	MS	1309684-01	1.3390	102.46	100.00	ug/L		101		70 - 130	
	MSD	1309684-01	1.3390	99.072	100.00	ug/L	3.4	97.7	20	70 - 130	

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Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
S05	The sample holding time was exceeded.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.