



January 8, 2014

Jeannette DeBartolomeo
Environmental Compliance Specialist
MDE-OCP
1800 Washington Blvd.
Suite 620
Baltimore, MD 21230

**RE: Groundwater Results
Drinking Water Results**
2802 Northeast Road (Ginski Residence)
2794 Northeast Road (O'Brien's Residence)
North East, Maryland 21901
Facility No. 5678
REPSG Project Reference No. 005977.130.01

Dear Ms. DeBartolomeo,

Attached please find the drinking water results for the O'Brien and Ginski Residences, located at 2802 and 2794 Northeast Road in Northeast Maryland related to the case NO.: 1992-2616-CE. These results are for the December 2013 drinking water events. Results for the December 2013 groundwater sampling event are also included.

If you have any questions or concerns, please do not hesitate to contact our office at 215-729-3220.

Sincerely,

Suzanne Shourds
Project Manager
React Environmental Professional Services Group, Inc

enclosures



**Analytical
Laboratory Services, Inc.**

Environmental • Industrial Hygiene • Field Services

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

2794

**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**

**ALL SHADED AREAS MUST BE COMPLETED BY THE
CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.**

Page 1 of 1

Courier: _____

Tracking #: _____

COC# _____

Co. Name: **REPSG, Inc.**
 Contact (Report to): **JAMES MANUEL**
 Address: **6901 Kingessing Ave.
Philadelphia, PA 19144**
 Phone: **215-719-3000**

Bill to: (if different than report to): **same**
 PO#: **8836**
 Project Name#: **Calvert Citygo/5917**
 ALSI Quote #:

TAT: Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALSI approval and surcharges.
 Date Required:
 Approved By:
 Email? **jmanuel@repsg.com / jmanuel@repsg.com**

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix
1 DW - 004 K	Post-FITATION	11/18/030	6 PM	2	VOCs by 524.2 Including Fuel oxygenates
2 DW - 004 S	MID-CARBON 1	11/18-3/035	6 PM	2	
3 DW - 004 I	MID-CARBON 2	11/18/040	6 PM	2	
4 DW - 004 C	Pre-FITATION	11/18/045	6 PM	2	
5					
6					
7					
8					

SAMPLED BY (Please Print): **COLE ALLEN**
 LOGGED BY (signature): _____

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1			2		
3			4		
5			6		
7			8		
9			10		

Container Type	**Container Size	Preservative	ANALYSES/METHOD REQUESTED
VOL	40ml	HCL	

Enter Number of Containers Per Analysis

REVIEWED BY (signature):	DATE:	TIME:

Data Deliverables

Standard CLP-like NI-Reduced NI-Full

SIWA Forming? State Sampler Estimated In?

MD NV PA

EDDs Required? (if yes, format type: **EQVMS**)

DOD Criteria Required?

Enter PWSID No. _____

Receipt Information (Completed by Sample Receiver)	
Performed by: _____	INITIAL HERE
Cooler Temp: _____	Therm. ID: _____
No. of Coolers: _____	Notes: _____

ASLI FIELD SERVICES	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?
Custody seals Present?	Y N	Y N	Y N	Y N
(if present) Seals intact?	Y N	Y N	Y N	Y N
Received on ice?	Y N	Y N	Y N	Y N
COC/Labels complete/accurate?	Y N	Y N	Y N	Y N
Container in good condition?	Y N	Y N	Y N	Y N

Circle appropriate Y or N.

* G=Grab; C=Composite ** Matrix: A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
 *** Container Type: AG=Amber Glass; CG=Clear Glass; PL=Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Pre-Filtration

Sample ID			DW-004C	DW-004C	DW-004C	DW-004C	DW-004C	DW-004C	DW-004C	DW-004C	DW-004C
Sample date			4/25/2013	5/21/2013	06/27/2013	07/26/2013	08/23/2013	9/13/2013	10/16/2013	11/19/2013	12/18/2013
Compound	EPA Std.	Unit									
1,2-Dichloroethane	5	ug/l	10.1	9.2	9.9	9.4	9.7	8.9	11.1	12.3	11.4
Acetone	**	ug/l	9.9	7.6	ND	11.6	ND	ND	ND	12.1	ND
Carbon disulfide	**	ug/l	0.46	2	0.26	ND	ND	ND	0.33	ND	ND
Cymene	**	ug/l	ND	ND	ND	ND	ND	ND	ND	0.36	ND
Diethyl ether	**	ug/l	0.22	0.23	ND	0.23	ND	ND	0.23	ND	ND
Isopropyl ether	**	ug/l	6.1	ND	ND	5.8	ND	5.2	6.3	7.2	ND
m-Dichlorobenzene	**	ug/l	ND	0.16	ND	0.68	ND	ND	ND	0.21	ND
Methyl ethyl ketone	**	ug/l	125	8.7	ND	ND	1.9	ND	ND	9.2	ND
Methyl tert-butyl ether	20	ug/l	519	497	526	423	491	427	444	519	433
p-Dichlorobenzene	75	ug/l	ND	ND	ND	0.18	ND	ND	ND	0.12	ND
sec-Butylbenzene	**	ug/l	ND	ND	ND	0.11	ND	ND	ND	ND	ND
Tert-Amyl alcohol	**	ug/l	165	ND	ND	ND	ND	145	ND	ND	186
Tert-Amyl Methyl Ether	**	ug/l	2.8	ND	2.5	3.3	2.6	2.9	3.8	3.9	3.4
tert-Butylalcohol	**	ug/l	5620	4700	4960	4090	5020	4350	4410	5180	4470
Tetrahydrofuran	**	ug/l	130	25	6.4	11.3	ND	ND	ND	ND	ND

Mid-Carbon 1

Sample ID			DW-004I	DW-004I	DW-004I	DW-004I	DW-004I	DW-004I	DW-004I	DW-004I	DW-004I
Sample date			4/25/2013	5/21/2013	06/27/2013	07/26/2013	08/23/2013	9/13/2013	10/16/2013	11/19/2013	12/18/2013
Compound	EPA Std.	Unit									
Acetone	**	ug/l	8.2	11.8	ND	6.4	8.1	ND	2.4	10.1	ND
Carbon disulfide	**	ug/l	ND	0.32	0.21	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	**	ug/l	184	10.4	ND	7.9	ND	ND	ND	8.7	ND
Methyl tert-butyl ether	20	ug/l	0.5	ND	0.58	1.4	9.5	0.38J	ND	ND	ND
n-Hexane	**	ug/l	ND	ND	0.44	ND	ND	ND	ND	ND	ND
tert-Butylalcohol	**	ug/l	177	4230	5520	4350	5510	4380	4280	5160	9350
Tetrahydrofuran	**	ug/l	158	20	10	44.3	17.3	4.2	12.9	14.5	ND

Mid-Carbon 2

Sample ID			DW-004J	DW-004J	DW-004J	DW-004J	DW-004J	DW-004J	DW-004J	DW-004J	DW-004J
Sample date			4/25/2013	5/21/2013	06/27/2013	07/26/2013	08/23/2013	9/13/2013	10/16/2013	11/19/2013	12/18/2013
Compound	EPA Std.	Unit									
Acetone	**	ug/l	5.7	5.6	ND	5.1	ND	ND	ND	12.2	ND
Carbon disulfide	**	ug/l	2.8	0.35	ND	0.33	ND	ND	ND	0.39	ND
Methyl ethyl ketone	**	ug/l	174	7.7	ND	ND	ND	ND	ND	10	ND
Methyl tert-butyl ether	20	ug/l	0.15	ND	0.11	ND	0.16	ND	ND	ND	ND
tert-Butylalcohol	**	ug/l	16.2	23.3	4820	5020	5430	4920	4400	4440	2400
Tetrahydrofuran	**	ug/l	128	14.8	ND	13.3	ND	11.8	17.2	10.9	ND

Post-Carbon

Sample ID			DW-004K	DW-004K	DW-004K	DW-004K	DW-004K	DW-004K	DW-004K	DW-004K	DW-004K
Sample date			4/25/2013	5/21/2013	06/27/2013	07/26/2013	08/23/2013	9/13/2013	10/16/2013	11/19/2013	12/18/2013
Compound	EPA Std.	Unit									
Acetone	**	ug/l	13.6	4.5	ND	5	ND	ND	ND	6	ND
n-Hexane	**	ug/l	ND	ND	ND	ND	ND	ND	ND	ND	22.7
Methyl ethyl ketone	**	ug/l	309	9.8	ND	ND	ND	2J	ND	11.2	ND
Methyl tert-butyl ether	20	ug/l	0.11	ND	ND	ND	ND	ND	ND	0.32	ND
tert-Butylalcohol	**	ug/l	12.6	10.2	3000	4280	5770	ND	3220	ND	4010
Tetrahydrofuran	**	ug/l	414	35.6	2.6	40.5	7.9	ND	6.7	4300	ND
Toluene	1000	ug/l	ND	ND	ND	ND	ND	ND	ND	10.3	ND

December 27, 2013

Ms. Brenda MacPhail Kellogg
REPSG
6901 Kingsessing Blvd.
Philadelphia, PA 19142

Certificate of Analysis

Project Name:	2013-CALVERT CITGO	Workorder:	1064417
Purchase Order:	8836	Workorder ID:	2013-CALVERT CITGO PROJECT/597

Dear Ms. Kellogg,

Enclosed are the analytical results for samples received by the laboratory on Thursday, December 19, 2013.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.


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ALS York: 978 Loucks Mill Road, York, PA 17402 717-505-5280

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. James Manuel

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.



Susan Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Discard Date: 01/10/2014

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
1064417001	DW-004K_20131218_N	Water	12/18/13 10:30	12/19/13 22:40	Customer
1064417002	DW-004J_20131218_N	Water	12/18/13 10:35	12/19/13 22:40	Customer
1064417003	DW-004I_20131218_N	Water	12/18/13 10:40	12/19/13 22:40	Customer
1064417004	DW-004C_20131218_N	Water	12/18/13 10:45	12/19/13 22:40	Customer

Workorder Comments:

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064417001** Date Collected: 12/18/2013 10:30 Matrix: Water
Sample ID: **DW-004K_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		500	220	EPA 524.2	12/27/13	06:25	TMP	B	
Acrylonitrile	ND	ug/L		250	88.0	EPA 524.2	12/27/13	06:25	TMP	B	
tert-Amyl methyl ether	ND	ug/L		50.0	15.0	EPA 524.2	12/27/13	06:25	TMP	B	
tert-Amyl Alcohol	ND	ug/L		500	160	EPA 524.2	12/27/13	06:25	TMP	B	
tert-Amyl Ethylether	ND	ug/L		50.0	12.0	EPA 524.2	12/27/13	06:25	TMP	B	
Benzene	ND	ug/L		50.0	7.0	EPA 524.2	12/27/13	06:25	TMP	B	
Bromobenzene	ND	ug/L		50.0	19.0	EPA 524.2	12/27/13	06:25	TMP	B	
Bromochloromethane	ND	ug/L		50.0	20.0	EPA 524.2	12/27/13	06:25	TMP	B	
Bromodichloromethane	ND	ug/L		50.0	22.0	EPA 524.2	12/27/13	06:25	TMP	B	
Bromoform	ND	ug/L		50.0	23.0	EPA 524.2	12/27/13	06:25	TMP	B	
Bromomethane	ND	ug/L		50.0	13.0	EPA 524.2	12/27/13	06:25	TMP	B	
2-Butanone	ND	ug/L		250	130	EPA 524.2	12/27/13	06:25	TMP	B	
tert-Butyl Alcohol	4010	ug/L		500	140	EPA 524.2	12/27/13	06:25	TMP	B	
n-Butylbenzene	ND	ug/L		50.0	13.0	EPA 524.2	12/27/13	06:25	TMP	B	
tert-Butylbenzene	ND	ug/L		50.0	24.0	EPA 524.2	12/27/13	06:25	TMP	B	
sec-Butylbenzene	ND	ug/L		50.0	10.0	EPA 524.2	12/27/13	06:25	TMP	B	
Carbon Disulfide	ND	ug/L		50.0	21.0	EPA 524.2	12/27/13	06:25	TMP	B	
Carbon Tetrachloride	ND	ug/L		50.0	20.0	EPA 524.2	12/27/13	06:25	TMP	B	
Chloroacetonitrile	ND	ug/L		250	88.0	EPA 524.2	12/27/13	06:25	TMP	B	
Chlorobenzene	ND	ug/L		50.0	14.0	EPA 524.2	12/27/13	06:25	TMP	B	
1-Chlorobutane	ND	ug/L		100	28.0	EPA 524.2	12/27/13	06:25	TMP	B	
Chlorodibromomethane	ND	ug/L		50.0	18.0	EPA 524.2	12/27/13	06:25	TMP	B	
Chloroethane	ND	ug/L		50.0	24.0	EPA 524.2	12/27/13	06:25	TMP	B	
Chloroform	ND	ug/L		50.0	19.0	EPA 524.2	12/27/13	06:25	TMP	B	
Chloromethane	ND	ug/L		50.0	22.0	EPA 524.2	12/27/13	06:25	TMP	B	
3-Chloro-1-propene	ND	ug/L		50.0	17.0	EPA 524.2	12/27/13	06:25	TMP	B	
o-Chlorotoluene	ND	ug/L		50.0	23.0	EPA 524.2	12/27/13	06:25	TMP	B	
p-Chlorotoluene	ND	ug/L		50.0	16.0	EPA 524.2	12/27/13	06:25	TMP	B	
1,2-Dibromo-3-chloropropane	ND	ug/L		50.0	23.0	EPA 524.2	12/27/13	06:25	TMP	B	
1,2-Dibromoethane	ND	ug/L		50.0	15.0	EPA 524.2	12/27/13	06:25	TMP	B	
Dibromomethane	ND	ug/L		50.0	24.0	EPA 524.2	12/27/13	06:25	TMP	B	
trans-1,4-Dichloro-2-butene	ND	ug/L		100	27.0	EPA 524.2	12/27/13	06:25	TMP	B	
1,1-Dichloro-2-Propanone	ND	ug/L		1250	220	EPA 524.2	12/27/13	06:25	TMP	B	
1,2-Dichlorobenzene	ND	ug/L		50.0	13.0	EPA 524.2	12/27/13	06:25	TMP	B	
1,3-Dichlorobenzene	ND	ug/L		50.0	11.0	EPA 524.2	12/27/13	06:25	TMP	B	
1,4-Dichlorobenzene	ND	ug/L		50.0	11.0	EPA 524.2	12/27/13	06:25	TMP	B	
Dichlorodifluoromethane	ND	ug/L	1	50.0	22.0	EPA 524.2	12/27/13	06:25	TMP	B	
1,1-Dichloroethane	ND	ug/L		50.0	11.0	EPA 524.2	12/27/13	06:25	TMP	B	
1,2-Dichloroethane	ND	ug/L		50.0	15.0	EPA 524.2	12/27/13	06:25	TMP	B	
1,1-Dichloroethene	ND	ug/L		50.0	22.0	EPA 524.2	12/27/13	06:25	TMP	B	

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ANALYTICAL RESULTS

Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Lab ID: 1064417001 **Date Collected:** 12/18/2013 10:30 **Matrix:** Water
Sample ID: DW-004K_20131218_N **Date Received:** 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
cis-1,2-Dichloroethene	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 06:25	TMP	B
trans-1,2-Dichloroethene	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 06:25	TMP	B
Dichlorofluoromethane	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 06:25	TMP	B
1,3-Dichloropropane	ND	ug/L		50.0	14.0	EPA 524.2			12/27/13 06:25	TMP	B
2,2-Dichloropropane	ND	ug/L		50.0	18.0	EPA 524.2			12/27/13 06:25	TMP	B
1,2-Dichloropropane	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 06:25	TMP	B
1,1-Dichloropropene	ND	ug/L		50.0	24.0	EPA 524.2			12/27/13 06:25	TMP	B
cis-1,3-Dichloropropene	ND	ug/L		50.0	15.0	EPA 524.2			12/27/13 06:25	TMP	B
trans-1,3-Dichloropropene	ND	ug/L		50.0	10.0	EPA 524.2			12/27/13 06:25	TMP	B
1,3-Dichloropropene, Total	ND	ug/L		100	23.0	EPA 524.2			12/27/13 06:25	TMP	B
Diisopropyl ether	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 06:25	TMP	B
1,4-Dioxane	ND	ug/L		400	150	EPA 524.2			12/27/13 06:25	TMP	B
Ethyl Ether	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 06:25	TMP	B
Ethyl Methacrylate	ND	ug/L		50.0	16.0	EPA 524.2			12/27/13 06:25	TMP	B
Ethyl tert-butyl ether	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 06:25	TMP	B
Ethylbenzene	ND	ug/L		50.0	18.0	EPA 524.2			12/27/13 06:25	TMP	B
Hexachlorobutadiene	ND	ug/L		50.0	24.0	EPA 524.2			12/27/13 06:25	TMP	B
Hexachloroethane	ND	ug/L		100	32.0	EPA 524.2			12/27/13 06:25	TMP	B
Hexane	22.7J	ug/L		50.0	22.0	EPA 524.2			12/27/13 06:25	TMP	B
2-Hexanone	ND	ug/L		250	82.0	EPA 524.2			12/27/13 06:25	TMP	B
Iodomethane	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 06:25	TMP	B
Isopropyl Alcohol	ND	ug/L		2500	390	EPA 524.2			12/27/13 06:25	TMP	B
Isopropylbenzene	ND	ug/L		50.0	14.0	EPA 524.2			12/27/13 06:25	TMP	B
p-Isopropyltoluene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 06:25	TMP	B
Methacrylonitrile	ND	ug/L		100	23.0	EPA 524.2			12/27/13 06:25	TMP	B
Methyl methacrylate	ND	ug/L		50.0	20.0	EPA 524.2			12/27/13 06:25	TMP	B
Methyl acrylate	ND	ug/L		100	21.0	EPA 524.2			12/27/13 06:25	TMP	B
Methyl t-Butyl Ether	ND	ug/L		50.0	9.0	EPA 524.2			12/27/13 06:25	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		250	56.0	EPA 524.2			12/27/13 06:25	TMP	B
Methylene Chloride	ND	ug/L		50.0	32.0	EPA 524.2			12/27/13 06:25	TMP	B
Naphthalene	ND	ug/L		50.0	15.0	EPA 524.2			12/27/13 06:25	TMP	B
Nitrobenzene	ND	ug/L		500	180	EPA 524.2			12/27/13 06:25	TMP	B
2-Nitropropane	ND	ug/L		250	80.0	EPA 524.2			12/27/13 06:25	TMP	B
Pentachloroethane	ND	ug/L	2	50.0	23.0	EPA 524.2			12/27/13 06:25	TMP	B
Propionitrile	ND	ug/L		250	70.0	EPA 524.2			12/27/13 06:25	TMP	B
n-Propylbenzene	ND	ug/L		50.0	10.0	EPA 524.2			12/27/13 06:25	TMP	B
Styrene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 06:25	TMP	B
1,1,1,2-Tetrachloroethane	ND	ug/L		50.0	22.0	EPA 524.2			12/27/13 06:25	TMP	B
1,1,2,2-Tetrachloroethane	ND	ug/L		50.0	13.0	EPA 524.2			12/27/13 06:25	TMP	B
Tetrachloroethene	ND	ug/L		50.0	17.0	EPA 524.2			12/27/13 06:25	TMP	B
Tetrahydrofuran	ND	ug/L		250	81.0	EPA 524.2			12/27/13 06:25	TMP	B
Toluene	ND	ug/L		50.0	12.0	EPA 524.2			12/27/13 06:25	TMP	B

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ANALYTICAL RESULTS


Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064417001** Date Collected: 12/18/2013 10:30 Matrix: Water
Sample ID: **DW-004K_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Xylenes	ND	ug/L		50.0	27.0	EPA 524.2			12/27/13 06:25	TMP	B
1,2,3-Trichlorobenzene	ND	ug/L		50.0	23.0	EPA 524.2			12/27/13 06:25	TMP	B
1,2,4-Trichlorobenzene	ND	ug/L		50.0	14.0	EPA 524.2			12/27/13 06:25	TMP	B
1,1,1-Trichloroethane	ND	ug/L		50.0	15.0	EPA 524.2			12/27/13 06:25	TMP	B
1,1,2-Trichloroethane	ND	ug/L		50.0	20.0	EPA 524.2			12/27/13 06:25	TMP	B
Trichloroethene	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 06:25	TMP	B
Trichlorofluoromethane	ND	ug/L		50.0	18.0	EPA 524.2			12/27/13 06:25	TMP	B
1,2,3-Trichloropropane	ND	ug/L		50.0	28.0	EPA 524.2			12/27/13 06:25	TMP	B
1,2,4-Trimethylbenzene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 06:25	TMP	B
1,3,5-Trimethylbenzene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 06:25	TMP	B
Vinyl Acetate	ND	ug/L	3	50.0	22.0	EPA 524.2			12/27/13 06:25	TMP	B
Vinyl Chloride	ND	ug/L	4	50.0	23.0	EPA 524.2			12/27/13 06:25	TMP	B
o-Xylene	ND	ug/L		50.0	12.0	EPA 524.2			12/27/13 06:25	TMP	B
mp-Xylene	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 06:25	TMP	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	81.4	%		70-130		EPA 524.2			12/27/13 06:25	TMP	B
4-Bromofluorobenzene (S)	74.4	%		70-130		EPA 524.2			12/27/13 06:25	TMP	B

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064417002** Date Collected: 12/18/2013 10:35 Matrix: Water
Sample ID: **DW-004J_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		500	220	EPA 524.2	12/27/13	06:51	TMP	B	
Acrylonitrile	ND	ug/L		250	88.0	EPA 524.2	12/27/13	06:51	TMP	B	
tert-Amyl methyl ether	ND	ug/L		50.0	15.0	EPA 524.2	12/27/13	06:51	TMP	B	
tert-Amyl Alcohol	ND	ug/L		500	160	EPA 524.2	12/27/13	06:51	TMP	B	
tert-Amyl Ethylether	ND	ug/L		50.0	12.0	EPA 524.2	12/27/13	06:51	TMP	B	
Benzene	ND	ug/L		50.0	7.0	EPA 524.2	12/27/13	06:51	TMP	B	
Bromobenzene	ND	ug/L		50.0	19.0	EPA 524.2	12/27/13	06:51	TMP	B	
Bromochloromethane	ND	ug/L		50.0	20.0	EPA 524.2	12/27/13	06:51	TMP	B	
Bromodichloromethane	ND	ug/L		50.0	22.0	EPA 524.2	12/27/13	06:51	TMP	B	
Bromoform	ND	ug/L		50.0	23.0	EPA 524.2	12/27/13	06:51	TMP	B	
Bromomethane	ND	ug/L		50.0	13.0	EPA 524.2	12/27/13	06:51	TMP	B	
2-Butanone	ND	ug/L		250	130	EPA 524.2	12/27/13	06:51	TMP	B	
tert-Butyl Alcohol	2400	ug/L		500	140	EPA 524.2	12/27/13	06:51	TMP	B	
n-Butylbenzene	ND	ug/L		50.0	13.0	EPA 524.2	12/27/13	06:51	TMP	B	
tert-Butylbenzene	ND	ug/L		50.0	24.0	EPA 524.2	12/27/13	06:51	TMP	B	
sec-Butylbenzene	ND	ug/L		50.0	10.0	EPA 524.2	12/27/13	06:51	TMP	B	
Carbon Disulfide	ND	ug/L		50.0	21.0	EPA 524.2	12/27/13	06:51	TMP	B	
Carbon Tetrachloride	ND	ug/L		50.0	20.0	EPA 524.2	12/27/13	06:51	TMP	B	
Chloroacetonitrile	ND	ug/L		250	88.0	EPA 524.2	12/27/13	06:51	TMP	B	
Chlorobenzene	ND	ug/L		50.0	14.0	EPA 524.2	12/27/13	06:51	TMP	B	
1-Chlorobutane	ND	ug/L		100	28.0	EPA 524.2	12/27/13	06:51	TMP	B	
Chlorodibromomethane	ND	ug/L		50.0	18.0	EPA 524.2	12/27/13	06:51	TMP	B	
Chloroethane	ND	ug/L		50.0	24.0	EPA 524.2	12/27/13	06:51	TMP	B	
Chloroform	ND	ug/L		50.0	19.0	EPA 524.2	12/27/13	06:51	TMP	B	
Chloromethane	ND	ug/L		50.0	22.0	EPA 524.2	12/27/13	06:51	TMP	B	
3-Chloro-1-propene	ND	ug/L		50.0	17.0	EPA 524.2	12/27/13	06:51	TMP	B	
o-Chlorotoluene	ND	ug/L		50.0	23.0	EPA 524.2	12/27/13	06:51	TMP	B	
p-Chlorotoluene	ND	ug/L		50.0	16.0	EPA 524.2	12/27/13	06:51	TMP	B	
1,2-Dibromo-3-chloropropane	ND	ug/L		50.0	23.0	EPA 524.2	12/27/13	06:51	TMP	B	
1,2-Dibromoethane	ND	ug/L		50.0	15.0	EPA 524.2	12/27/13	06:51	TMP	B	
Dibromomethane	ND	ug/L		50.0	24.0	EPA 524.2	12/27/13	06:51	TMP	B	
trans-1,4-Dichloro-2-butene	ND	ug/L		100	27.0	EPA 524.2	12/27/13	06:51	TMP	B	
1,1-Dichloro-2-Propanone	ND	ug/L		1250	220	EPA 524.2	12/27/13	06:51	TMP	B	
1,2-Dichlorobenzene	ND	ug/L		50.0	13.0	EPA 524.2	12/27/13	06:51	TMP	B	
1,3-Dichlorobenzene	ND	ug/L		50.0	11.0	EPA 524.2	12/27/13	06:51	TMP	B	
1,4-Dichlorobenzene	ND	ug/L		50.0	11.0	EPA 524.2	12/27/13	06:51	TMP	B	
Dichlorodifluoromethane	ND	ug/L	1	50.0	22.0	EPA 524.2	12/27/13	06:51	TMP	B	
1,1-Dichloroethane	ND	ug/L		50.0	11.0	EPA 524.2	12/27/13	06:51	TMP	B	
1,2-Dichloroethane	ND	ug/L		50.0	15.0	EPA 524.2	12/27/13	06:51	TMP	B	
1,1-Dichloroethene	ND	ug/L		50.0	22.0	EPA 524.2	12/27/13	06:51	TMP	B	

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ANALYTICAL RESULTS

Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064417002** Date Collected: 12/18/2013 10:35 Matrix: Water
Sample ID: **DW-004J_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
cis-1,2-Dichloroethene	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 06:51	TMP	B
trans-1,2-Dichloroethene	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 06:51	TMP	B
Dichlorofluoromethane	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 06:51	TMP	B
1,3-Dichloropropane	ND	ug/L		50.0	14.0	EPA 524.2			12/27/13 06:51	TMP	B
2,2-Dichloropropane	ND	ug/L		50.0	18.0	EPA 524.2			12/27/13 06:51	TMP	B
1,2-Dichloropropane	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 06:51	TMP	B
1,1-Dichloropropene	ND	ug/L		50.0	24.0	EPA 524.2			12/27/13 06:51	TMP	B
cis-1,3-Dichloropropene	ND	ug/L		50.0	15.0	EPA 524.2			12/27/13 06:51	TMP	B
trans-1,3-Dichloropropene	ND	ug/L		50.0	10.0	EPA 524.2			12/27/13 06:51	TMP	B
1,3-Dichloropropene, Total	ND	ug/L		100	23.0	EPA 524.2			12/27/13 06:51	TMP	B
Diisopropyl ether	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 06:51	TMP	B
1,4-Dioxane	ND	ug/L		400	150	EPA 524.2			12/27/13 06:51	TMP	B
Ethyl Ether	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 06:51	TMP	B
Ethyl Methacrylate	ND	ug/L		50.0	16.0	EPA 524.2			12/27/13 06:51	TMP	B
Ethyl tert-butyl ether	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 06:51	TMP	B
Ethylbenzene	ND	ug/L		50.0	18.0	EPA 524.2			12/27/13 06:51	TMP	B
Hexachlorobutadiene	ND	ug/L		50.0	24.0	EPA 524.2			12/27/13 06:51	TMP	B
Hexachloroethane	ND	ug/L		100	32.0	EPA 524.2			12/27/13 06:51	TMP	B
Hexane	ND	ug/L		50.0	22.0	EPA 524.2			12/27/13 06:51	TMP	B
2-Hexanone	ND	ug/L		250	82.0	EPA 524.2			12/27/13 06:51	TMP	B
Iodomethane	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 06:51	TMP	B
Isopropyl Alcohol	ND	ug/L		2500	390	EPA 524.2			12/27/13 06:51	TMP	B
Isopropylbenzene	ND	ug/L		50.0	14.0	EPA 524.2			12/27/13 06:51	TMP	B
p-Isopropyltoluene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 06:51	TMP	B
Methacrylonitrile	ND	ug/L		100	23.0	EPA 524.2			12/27/13 06:51	TMP	B
Methyl methacrylate	ND	ug/L		50.0	20.0	EPA 524.2			12/27/13 06:51	TMP	B
Methyl acrylate	ND	ug/L		100	21.0	EPA 524.2			12/27/13 06:51	TMP	B
Methyl t-Butyl Ether	ND	ug/L		50.0	9.0	EPA 524.2			12/27/13 06:51	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		250	56.0	EPA 524.2			12/27/13 06:51	TMP	B
Methylene Chloride	ND	ug/L		50.0	32.0	EPA 524.2			12/27/13 06:51	TMP	B
Naphthalene	ND	ug/L		50.0	15.0	EPA 524.2			12/27/13 06:51	TMP	B
Nitrobenzene	ND	ug/L		500	180	EPA 524.2			12/27/13 06:51	TMP	B
2-Nitropropane	ND	ug/L		250	80.0	EPA 524.2			12/27/13 06:51	TMP	B
Pentachloroethane	ND	ug/L	2	50.0	23.0	EPA 524.2			12/27/13 06:51	TMP	B
Propionitrile	ND	ug/L		250	70.0	EPA 524.2			12/27/13 06:51	TMP	B
n-Propylbenzene	ND	ug/L		50.0	10.0	EPA 524.2			12/27/13 06:51	TMP	B
Styrene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 06:51	TMP	B
1,1,1,2-Tetrachloroethane	ND	ug/L		50.0	22.0	EPA 524.2			12/27/13 06:51	TMP	B
1,1,2,2-Tetrachloroethane	ND	ug/L		50.0	13.0	EPA 524.2			12/27/13 06:51	TMP	B
Tetrachloroethene	ND	ug/L		50.0	17.0	EPA 524.2			12/27/13 06:51	TMP	B
Tetrahydrofuran	ND	ug/L		250	81.0	EPA 524.2			12/27/13 06:51	TMP	B
Toluene	ND	ug/L		50.0	12.0	EPA 524.2			12/27/13 06:51	TMP	B

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ANALYTICAL RESULTS


Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064417002** Date Collected: 12/18/2013 10:35 Matrix: Water
Sample ID: **DW-004J_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Xylenes	ND	ug/L		50.0	27.0	EPA 524.2			12/27/13 06:51	TMP	B
1,2,3-Trichlorobenzene	ND	ug/L		50.0	23.0	EPA 524.2			12/27/13 06:51	TMP	B
1,2,4-Trichlorobenzene	ND	ug/L		50.0	14.0	EPA 524.2			12/27/13 06:51	TMP	B
1,1,1-Trichloroethane	ND	ug/L		50.0	15.0	EPA 524.2			12/27/13 06:51	TMP	B
1,1,2-Trichloroethane	ND	ug/L		50.0	20.0	EPA 524.2			12/27/13 06:51	TMP	B
Trichloroethene	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 06:51	TMP	B
Trichlorofluoromethane	ND	ug/L		50.0	18.0	EPA 524.2			12/27/13 06:51	TMP	B
1,2,3-Trichloropropane	ND	ug/L		50.0	28.0	EPA 524.2			12/27/13 06:51	TMP	B
1,2,4-Trimethylbenzene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 06:51	TMP	B
1,3,5-Trimethylbenzene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 06:51	TMP	B
Vinyl Acetate	ND	ug/L	3	50.0	22.0	EPA 524.2			12/27/13 06:51	TMP	B
Vinyl Chloride	ND	ug/L	4	50.0	23.0	EPA 524.2			12/27/13 06:51	TMP	B
o-Xylene	ND	ug/L		50.0	12.0	EPA 524.2			12/27/13 06:51	TMP	B
mp-Xylene	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 06:51	TMP	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	75.5	%		70-130		EPA 524.2			12/27/13 06:51	TMP	B
4-Bromofluorobenzene (S)	77.1	%		70-130		EPA 524.2			12/27/13 06:51	TMP	B

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

 Lab ID: **1064417003** Date Collected: 12/18/2013 10:40 Matrix: Water
 Sample ID: **DW-004I_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		500	220	EPA 524.2	12/27/13 07:17	TMP		B	
Acrylonitrile	ND	ug/L		250	88.0	EPA 524.2	12/27/13 07:17	TMP		B	
tert-Amyl methyl ether	ND	ug/L		50.0	15.0	EPA 524.2	12/27/13 07:17	TMP		B	
tert-Amyl Alcohol	ND	ug/L		500	160	EPA 524.2	12/27/13 07:17	TMP		B	
tert-Amyl Ethylether	ND	ug/L		50.0	12.0	EPA 524.2	12/27/13 07:17	TMP		B	
Benzene	ND	ug/L		50.0	7.0	EPA 524.2	12/27/13 07:17	TMP		B	
Bromobenzene	ND	ug/L		50.0	19.0	EPA 524.2	12/27/13 07:17	TMP		B	
Bromochloromethane	ND	ug/L		50.0	20.0	EPA 524.2	12/27/13 07:17	TMP		B	
Bromodichloromethane	ND	ug/L		50.0	22.0	EPA 524.2	12/27/13 07:17	TMP		B	
Bromoform	ND	ug/L		50.0	23.0	EPA 524.2	12/27/13 07:17	TMP		B	
Bromomethane	ND	ug/L		50.0	13.0	EPA 524.2	12/27/13 07:17	TMP		B	
2-Butanone	ND	ug/L		250	130	EPA 524.2	12/27/13 07:17	TMP		B	
tert-Butyl Alcohol	9350	ug/L		500	140	EPA 524.2	12/27/13 07:17	TMP		B	
n-Butylbenzene	ND	ug/L		50.0	13.0	EPA 524.2	12/27/13 07:17	TMP		B	
tert-Butylbenzene	ND	ug/L		50.0	24.0	EPA 524.2	12/27/13 07:17	TMP		B	
sec-Butylbenzene	ND	ug/L		50.0	10.0	EPA 524.2	12/27/13 07:17	TMP		B	
Carbon Disulfide	ND	ug/L		50.0	21.0	EPA 524.2	12/27/13 07:17	TMP		B	
Carbon Tetrachloride	ND	ug/L		50.0	20.0	EPA 524.2	12/27/13 07:17	TMP		B	
Chloroacetonitrile	ND	ug/L		250	88.0	EPA 524.2	12/27/13 07:17	TMP		B	
Chlorobenzene	ND	ug/L		50.0	14.0	EPA 524.2	12/27/13 07:17	TMP		B	
1-Chlorobutane	ND	ug/L		100	28.0	EPA 524.2	12/27/13 07:17	TMP		B	
Chlorodibromomethane	ND	ug/L		50.0	18.0	EPA 524.2	12/27/13 07:17	TMP		B	
Chloroethane	ND	ug/L		50.0	24.0	EPA 524.2	12/27/13 07:17	TMP		B	
Chloroform	ND	ug/L		50.0	19.0	EPA 524.2	12/27/13 07:17	TMP		B	
Chloromethane	ND	ug/L		50.0	22.0	EPA 524.2	12/27/13 07:17	TMP		B	
3-Chloro-1-propene	ND	ug/L		50.0	17.0	EPA 524.2	12/27/13 07:17	TMP		B	
o-Chlorotoluene	ND	ug/L		50.0	23.0	EPA 524.2	12/27/13 07:17	TMP		B	
p-Chlorotoluene	ND	ug/L		50.0	16.0	EPA 524.2	12/27/13 07:17	TMP		B	
1,2-Dibromo-3-chloropropane	ND	ug/L		50.0	23.0	EPA 524.2	12/27/13 07:17	TMP		B	
1,2-Dibromoethane	ND	ug/L		50.0	15.0	EPA 524.2	12/27/13 07:17	TMP		B	
Dibromomethane	ND	ug/L		50.0	24.0	EPA 524.2	12/27/13 07:17	TMP		B	
trans-1,4-Dichloro-2-butene	ND	ug/L		100	27.0	EPA 524.2	12/27/13 07:17	TMP		B	
1,1-Dichloro-2-Propanone	ND	ug/L		1250	220	EPA 524.2	12/27/13 07:17	TMP		B	
1,2-Dichlorobenzene	ND	ug/L		50.0	13.0	EPA 524.2	12/27/13 07:17	TMP		B	
1,3-Dichlorobenzene	ND	ug/L		50.0	11.0	EPA 524.2	12/27/13 07:17	TMP		B	
1,4-Dichlorobenzene	ND	ug/L		50.0	11.0	EPA 524.2	12/27/13 07:17	TMP		B	
Dichlorodifluoromethane	ND	ug/L	1	50.0	22.0	EPA 524.2	12/27/13 07:17	TMP		B	
1,1-Dichloroethane	ND	ug/L		50.0	11.0	EPA 524.2	12/27/13 07:17	TMP		B	
1,2-Dichloroethane	ND	ug/L		50.0	15.0	EPA 524.2	12/27/13 07:17	TMP		B	
1,1-Dichloroethene	ND	ug/L		50.0	22.0	EPA 524.2	12/27/13 07:17	TMP		B	

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ANALYTICAL RESULTS

Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064417003** Date Collected: 12/18/2013 10:40 Matrix: Water
Sample ID: **DW-004I_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
cis-1,2-Dichloroethene	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 07:17	TMP	B
trans-1,2-Dichloroethene	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 07:17	TMP	B
Dichlorofluoromethane	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 07:17	TMP	B
1,3-Dichloropropane	ND	ug/L		50.0	14.0	EPA 524.2			12/27/13 07:17	TMP	B
2,2-Dichloropropane	ND	ug/L		50.0	18.0	EPA 524.2			12/27/13 07:17	TMP	B
1,2-Dichloropropane	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 07:17	TMP	B
1,1-Dichloropropene	ND	ug/L		50.0	24.0	EPA 524.2			12/27/13 07:17	TMP	B
cis-1,3-Dichloropropene	ND	ug/L		50.0	15.0	EPA 524.2			12/27/13 07:17	TMP	B
trans-1,3-Dichloropropene	ND	ug/L		50.0	10.0	EPA 524.2			12/27/13 07:17	TMP	B
1,3-Dichloropropene, Total	ND	ug/L		100	23.0	EPA 524.2			12/27/13 07:17	TMP	B
Diisopropyl ether	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 07:17	TMP	B
1,4-Dioxane	ND	ug/L		400	150	EPA 524.2			12/27/13 07:17	TMP	B
Ethyl Ether	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 07:17	TMP	B
Ethyl Methacrylate	ND	ug/L		50.0	16.0	EPA 524.2			12/27/13 07:17	TMP	B
Ethyl tert-butyl ether	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 07:17	TMP	B
Ethylbenzene	ND	ug/L		50.0	18.0	EPA 524.2			12/27/13 07:17	TMP	B
Hexachlorobutadiene	ND	ug/L		50.0	24.0	EPA 524.2			12/27/13 07:17	TMP	B
Hexachloroethane	ND	ug/L		100	32.0	EPA 524.2			12/27/13 07:17	TMP	B
Hexane	ND	ug/L		50.0	22.0	EPA 524.2			12/27/13 07:17	TMP	B
2-Hexanone	ND	ug/L		250	82.0	EPA 524.2			12/27/13 07:17	TMP	B
Iodomethane	ND	ug/L		50.0	19.0	EPA 524.2			12/27/13 07:17	TMP	B
Isopropyl Alcohol	ND	ug/L		2500	390	EPA 524.2			12/27/13 07:17	TMP	B
Isopropylbenzene	ND	ug/L		50.0	14.0	EPA 524.2			12/27/13 07:17	TMP	B
p-Isopropyltoluene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 07:17	TMP	B
Methacrylonitrile	ND	ug/L		100	23.0	EPA 524.2			12/27/13 07:17	TMP	B
Methyl methacrylate	ND	ug/L		50.0	20.0	EPA 524.2			12/27/13 07:17	TMP	B
Methyl acrylate	ND	ug/L		100	21.0	EPA 524.2			12/27/13 07:17	TMP	B
Methyl t-Butyl Ether	ND	ug/L		50.0	9.0	EPA 524.2			12/27/13 07:17	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		250	56.0	EPA 524.2			12/27/13 07:17	TMP	B
Methylene Chloride	ND	ug/L		50.0	32.0	EPA 524.2			12/27/13 07:17	TMP	B
Naphthalene	ND	ug/L		50.0	15.0	EPA 524.2			12/27/13 07:17	TMP	B
Nitrobenzene	ND	ug/L		500	180	EPA 524.2			12/27/13 07:17	TMP	B
2-Nitropropane	ND	ug/L		250	80.0	EPA 524.2			12/27/13 07:17	TMP	B
Pentachloroethane	ND	ug/L	2	50.0	23.0	EPA 524.2			12/27/13 07:17	TMP	B
Propionitrile	ND	ug/L		250	70.0	EPA 524.2			12/27/13 07:17	TMP	B
n-Propylbenzene	ND	ug/L		50.0	10.0	EPA 524.2			12/27/13 07:17	TMP	B
Styrene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 07:17	TMP	B
1,1,1,2-Tetrachloroethane	ND	ug/L		50.0	22.0	EPA 524.2			12/27/13 07:17	TMP	B
1,1,2,2-Tetrachloroethane	ND	ug/L		50.0	13.0	EPA 524.2			12/27/13 07:17	TMP	B
Tetrachloroethene	ND	ug/L		50.0	17.0	EPA 524.2			12/27/13 07:17	TMP	B
Tetrahydrofuran	ND	ug/L		250	81.0	EPA 524.2			12/27/13 07:17	TMP	B
Toluene	ND	ug/L		50.0	12.0	EPA 524.2			12/27/13 07:17	TMP	B

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ANALYTICAL RESULTS


Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064417003** Date Collected: 12/18/2013 10:40 Matrix: Water
Sample ID: **DW-004I_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Xylenes	ND	ug/L		50.0	27.0	EPA 524.2			12/27/13 07:17	TMP	B
1,2,3-Trichlorobenzene	ND	ug/L		50.0	23.0	EPA 524.2			12/27/13 07:17	TMP	B
1,2,4-Trichlorobenzene	ND	ug/L		50.0	14.0	EPA 524.2			12/27/13 07:17	TMP	B
1,1,1-Trichloroethane	ND	ug/L		50.0	15.0	EPA 524.2			12/27/13 07:17	TMP	B
1,1,2-Trichloroethane	ND	ug/L		50.0	20.0	EPA 524.2			12/27/13 07:17	TMP	B
Trichloroethene	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 07:17	TMP	B
Trichlorofluoromethane	ND	ug/L		50.0	18.0	EPA 524.2			12/27/13 07:17	TMP	B
1,2,3-Trichloropropane	ND	ug/L		50.0	28.0	EPA 524.2			12/27/13 07:17	TMP	B
1,2,4-Trimethylbenzene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 07:17	TMP	B
1,3,5-Trimethylbenzene	ND	ug/L		50.0	11.0	EPA 524.2			12/27/13 07:17	TMP	B
Vinyl Acetate	ND	ug/L	3	50.0	22.0	EPA 524.2			12/27/13 07:17	TMP	B
Vinyl Chloride	ND	ug/L	4	50.0	23.0	EPA 524.2			12/27/13 07:17	TMP	B
o-Xylene	ND	ug/L		50.0	12.0	EPA 524.2			12/27/13 07:17	TMP	B
mp-Xylene	ND	ug/L		50.0	21.0	EPA 524.2			12/27/13 07:17	TMP	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	82.8	%		70-130		EPA 524.2			12/27/13 07:17	TMP	B
4-Bromofluorobenzene (S)	74.6	%		70-130		EPA 524.2			12/27/13 07:17	TMP	B

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Lab ID: 1064417004 **Date Collected:** 12/18/2013 10:45 **Matrix:** Water
Sample ID: DW-004C_20131218_N **Date Received:** 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		5.0	2.2	EPA 524.2	12/21/13		08:58	TMP	A
Acrylonitrile	ND	ug/L		2.5	0.88	EPA 524.2	12/21/13		08:58	TMP	A
tert-Amyl methyl ether	3.4	ug/L		0.50	0.15	EPA 524.2	12/21/13		08:58	TMP	A
tert-Amyl Alcohol	186	ug/L		5.0	1.6	EPA 524.2	12/21/13		08:58	TMP	A
tert-Amyl Ethylether	ND	ug/L		0.50	0.12	EPA 524.2	12/21/13		08:58	TMP	A
Benzene	ND	ug/L		0.50	0.070	EPA 524.2	12/21/13		08:58	TMP	A
Bromobenzene	ND	ug/L		0.50	0.19	EPA 524.2	12/21/13		08:58	TMP	A
Bromochloromethane	ND	ug/L		0.50	0.20	EPA 524.2	12/21/13		08:58	TMP	A
Bromodichloromethane	ND	ug/L		0.50	0.22	EPA 524.2	12/21/13		08:58	TMP	A
Bromoform	ND	ug/L		0.50	0.23	EPA 524.2	12/21/13		08:58	TMP	A
Bromomethane	ND	ug/L		0.50	0.13	EPA 524.2	12/21/13		08:58	TMP	A
2-Butanone	ND	ug/L		2.5	1.3	EPA 524.2	12/21/13		08:58	TMP	A
tert-Butyl Alcohol	4470	ug/L		500	140	EPA 524.2	12/27/13		07:43	TMP	B
n-Butylbenzene	ND	ug/L		0.50	0.13	EPA 524.2	12/21/13		08:58	TMP	A
tert-Butylbenzene	ND	ug/L		0.50	0.24	EPA 524.2	12/21/13		08:58	TMP	A
sec-Butylbenzene	ND	ug/L		0.50	0.10	EPA 524.2	12/21/13		08:58	TMP	A
Carbon Disulfide	ND	ug/L		0.50	0.21	EPA 524.2	12/21/13		08:58	TMP	A
Carbon Tetrachloride	ND	ug/L		0.50	0.20	EPA 524.2	12/21/13		08:58	TMP	A
Chloroacetonitrile	ND	ug/L		2.5	0.88	EPA 524.2	12/21/13		08:58	TMP	A
Chlorobenzene	ND	ug/L		0.50	0.14	EPA 524.2	12/21/13		08:58	TMP	A
1-Chlorobutane	ND	ug/L		1.0	0.28	EPA 524.2	12/21/13		08:58	TMP	A
Chlorodibromomethane	ND	ug/L		0.50	0.18	EPA 524.2	12/21/13		08:58	TMP	A
Chloroethane	ND	ug/L		0.50	0.24	EPA 524.2	12/21/13		08:58	TMP	A
Chloroform	ND	ug/L		0.50	0.19	EPA 524.2	12/21/13		08:58	TMP	A
Chloromethane	ND	ug/L		0.50	0.22	EPA 524.2	12/21/13		08:58	TMP	A
3-Chloro-1-propene	ND	ug/L		0.50	0.17	EPA 524.2	12/21/13		08:58	TMP	A
o-Chlorotoluene	ND	ug/L		0.50	0.23	EPA 524.2	12/21/13		08:58	TMP	A
p-Chlorotoluene	ND	ug/L		0.50	0.16	EPA 524.2	12/21/13		08:58	TMP	A
1,2-Dibromo-3-chloropropane	ND	ug/L		0.50	0.23	EPA 524.2	12/21/13		08:58	TMP	A
1,2-Dibromoethane	ND	ug/L		0.50	0.15	EPA 524.2	12/21/13		08:58	TMP	A
Dibromomethane	ND	ug/L		0.50	0.24	EPA 524.2	12/21/13		08:58	TMP	A
trans-1,4-Dichloro-2-butene	ND	ug/L		1.0	0.27	EPA 524.2	12/21/13		08:58	TMP	A
1,1-Dichloro-2-Propanone	ND	ug/L		12.5	2.2	EPA 524.2	12/21/13		08:58	TMP	A
1,2-Dichlorobenzene	ND	ug/L		0.50	0.13	EPA 524.2	12/21/13		08:58	TMP	A
1,3-Dichlorobenzene	ND	ug/L		0.50	0.11	EPA 524.2	12/21/13		08:58	TMP	A
1,4-Dichlorobenzene	ND	ug/L		0.50	0.11	EPA 524.2	12/21/13		08:58	TMP	A
Dichlorodifluoromethane	ND	ug/L		0.50	0.22	EPA 524.2	12/21/13		08:58	TMP	A
1,1-Dichloroethane	ND	ug/L		0.50	0.11	EPA 524.2	12/21/13		08:58	TMP	A
1,2-Dichloroethane	11.4	ug/L		0.50	0.15	EPA 524.2	12/21/13		08:58	TMP	A
1,1-Dichloroethene	ND	ug/L		0.50	0.22	EPA 524.2	12/21/13		08:58	TMP	A

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ANALYTICAL RESULTS

Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064417004** Date Collected: 12/18/2013 10:45 Matrix: Water
Sample ID: **DW-004C_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
cis-1,2-Dichloroethene	ND	ug/L		0.50	0.19	EPA 524.2			12/21/13 08:58	TMP	A
trans-1,2-Dichloroethene	ND	ug/L		0.50	0.19	EPA 524.2			12/21/13 08:58	TMP	A
Dichlorofluoromethane	ND	ug/L		0.50	0.21	EPA 524.2			12/21/13 08:58	TMP	A
1,3-Dichloropropane	ND	ug/L		0.50	0.14	EPA 524.2			12/21/13 08:58	TMP	A
2,2-Dichloropropane	ND	ug/L		0.50	0.18	EPA 524.2			12/21/13 08:58	TMP	A
1,2-Dichloropropane	ND	ug/L		0.50	0.19	EPA 524.2			12/21/13 08:58	TMP	A
1,1-Dichloropropene	ND	ug/L		0.50	0.24	EPA 524.2			12/21/13 08:58	TMP	A
cis-1,3-Dichloropropene	ND	ug/L		0.50	0.15	EPA 524.2			12/21/13 08:58	TMP	A
trans-1,3-Dichloropropene	ND	ug/L		0.50	0.10	EPA 524.2			12/21/13 08:58	TMP	A
1,3-Dichloropropene, Total	ND	ug/L		1.0	0.23	EPA 524.2			12/21/13 08:58	TMP	A
Diisopropyl ether	ND	ug/L		0.50	0.21	EPA 524.2			12/21/13 08:58	TMP	A
1,4-Dioxane	ND	ug/L		4.0	1.5	EPA 524.2			12/21/13 08:58	TMP	A
Ethyl Ether	ND	ug/L		0.50	0.21	EPA 524.2			12/21/13 08:58	TMP	A
Ethyl Methacrylate	ND	ug/L		0.50	0.16	EPA 524.2			12/21/13 08:58	TMP	A
Ethyl tert-butyl ether	ND	ug/L		0.50	0.19	EPA 524.2			12/21/13 08:58	TMP	A
Ethylbenzene	ND	ug/L		0.50	0.18	EPA 524.2			12/21/13 08:58	TMP	A
Hexachlorobutadiene	ND	ug/L		0.50	0.24	EPA 524.2			12/21/13 08:58	TMP	A
Hexachloroethane	ND	ug/L		1.0	0.32	EPA 524.2			12/21/13 08:58	TMP	A
Hexane	ND	ug/L		0.50	0.22	EPA 524.2			12/21/13 08:58	TMP	A
2-Hexanone	ND	ug/L		2.5	0.82	EPA 524.2			12/21/13 08:58	TMP	A
Iodomethane	ND	ug/L		0.50	0.19	EPA 524.2			12/21/13 08:58	TMP	A
Isopropyl Alcohol	ND	ug/L		25.0	3.9	EPA 524.2			12/21/13 08:58	TMP	A
Isopropylbenzene	ND	ug/L		0.50	0.14	EPA 524.2			12/21/13 08:58	TMP	A
p-Isopropyltoluene	ND	ug/L		0.50	0.11	EPA 524.2			12/21/13 08:58	TMP	A
Methacrylonitrile	ND	ug/L		1.0	0.23	EPA 524.2			12/21/13 08:58	TMP	A
Methyl methacrylate	ND	ug/L		0.50	0.20	EPA 524.2			12/21/13 08:58	TMP	A
Methyl acrylate	ND	ug/L		1.0	0.21	EPA 524.2			12/21/13 08:58	TMP	A
Methyl t-Butyl Ether	433	ug/L		50.0	9.0	EPA 524.2			12/27/13 07:43	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		2.5	0.56	EPA 524.2			12/21/13 08:58	TMP	A
Methylene Chloride	ND	ug/L		0.50	0.32	EPA 524.2			12/21/13 08:58	TMP	A
Naphthalene	ND	ug/L		0.50	0.15	EPA 524.2			12/21/13 08:58	TMP	A
Nitrobenzene	ND	ug/L		5.0	1.8	EPA 524.2			12/21/13 08:58	TMP	A
2-Nitropropane	ND	ug/L		2.5	0.80	EPA 524.2			12/21/13 08:58	TMP	A
Pentachloroethane	ND	ug/L		0.50	0.23	EPA 524.2			12/21/13 08:58	TMP	A
Propionitrile	ND	ug/L		2.5	0.70	EPA 524.2			12/21/13 08:58	TMP	A
n-Propylbenzene	ND	ug/L		0.50	0.10	EPA 524.2			12/21/13 08:58	TMP	A
Styrene	ND	ug/L		0.50	0.11	EPA 524.2			12/21/13 08:58	TMP	A
1,1,1,2-Tetrachloroethane	ND	ug/L		0.50	0.22	EPA 524.2			12/21/13 08:58	TMP	A
1,1,2,2-Tetrachloroethane	ND	ug/L		0.50	0.13	EPA 524.2			12/21/13 08:58	TMP	A
Tetrachloroethene	ND	ug/L		0.50	0.17	EPA 524.2			12/21/13 08:58	TMP	A
Tetrahydrofuran	ND	ug/L		2.5	0.81	EPA 524.2			12/21/13 08:58	TMP	A
Toluene	ND	ug/L		0.50	0.12	EPA 524.2			12/21/13 08:58	TMP	A

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ANALYTICAL RESULTS

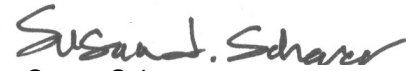
Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064417004** Date Collected: 12/18/2013 10:45 Matrix: Water
Sample ID: **DW-004C_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Xylenes	ND	ug/L		0.50	0.27	EPA 524.2			12/21/13 08:58	TMP	A
1,2,3-Trichlorobenzene	ND	ug/L		0.50	0.23	EPA 524.2			12/21/13 08:58	TMP	A
1,2,4-Trichlorobenzene	ND	ug/L		0.50	0.14	EPA 524.2			12/21/13 08:58	TMP	A
1,1,1-Trichloroethane	ND	ug/L		0.50	0.15	EPA 524.2			12/21/13 08:58	TMP	A
1,1,2-Trichloroethane	ND	ug/L		0.50	0.20	EPA 524.2			12/21/13 08:58	TMP	A
Trichloroethene	ND	ug/L		0.50	0.21	EPA 524.2			12/21/13 08:58	TMP	A
Trichlorofluoromethane	ND	ug/L		0.50	0.18	EPA 524.2			12/21/13 08:58	TMP	A
1,2,3-Trichloropropane	ND	ug/L		0.50	0.28	EPA 524.2			12/21/13 08:58	TMP	A
1,2,4-Trimethylbenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/21/13 08:58	TMP	A
1,3,5-Trimethylbenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/21/13 08:58	TMP	A
Vinyl Acetate	ND	ug/L		0.50	0.22	EPA 524.2			12/21/13 08:58	TMP	A
Vinyl Chloride	ND	ug/L		0.50	0.23	EPA 524.2			12/21/13 08:58	TMP	A
o-Xylene	ND	ug/L		0.50	0.12	EPA 524.2			12/21/13 08:58	TMP	A
mp-Xylene	ND	ug/L		0.50	0.21	EPA 524.2			12/21/13 08:58	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	81.9	%		70-130		EPA 524.2			12/21/13 08:58	TMP	A
4-Bromofluorobenzene (S)	71.8	%		70-130		EPA 524.2			12/21/13 08:58	TMP	A
1,2-Dichlorobenzene-d4 (S)	76.9	%		70-130		EPA 524.2			12/27/13 07:43	TMP	B
4-Bromofluorobenzene (S)	77.2	%		70-130		EPA 524.2			12/27/13 07:43	TMP	B

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 1064417 2013-CALVERT CITGO PROJECT/597

PARAMETER QUALIFIERS\FLAGS

- [1] The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Dichlorodifluoromethane. The % Recovery was reported as 60.1 and the control limits were 70 to 130.
- [2] The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Pentachloroethane. The % Recovery was reported as 69.6 and the control limits were 70 to 130.
- [3] The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Vinyl Acetate. The % Recovery was reported as 60.5 and the control limits were 70 to 130.
- [4] The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Vinyl Chloride. The % Recovery was reported as 68 and the control limits were 70 to 130.

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2794

Analytical Laboratory Services, Inc.
 Environmental • Industrial Hygiene • Field Services
 34 Dogwood Lane • Middletown, PA 17057 • 717-944-5541 • Fax: 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS
 ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 1
 Courtes Tracking #: 1064417

Co. Name: RELSG, Inc. **Phone:** 717-789-3880
Contact (Report to): James Manuel
Address: 604 Kingsessing Ave. Philadelphia, PA 19148
Bill to (if different than Report to): same **PO#:** 8836
Project Name#: Calvert City/5977 **ALSI Quote #:** _____
TAT: Normal-Standard TAT is 10-12 business days. **Date Required:** _____
 Rush-Subject to ALSI approval and surcharges. **Approved By:** _____
Email? Jamesmanuel@relsg.com/jmacphillips@relsg.com
Fax? No.

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	Matrix	Enter Number of Containers Per Analysis	ANALYSIS METHOD REQUESTED
1 DW-004 K	Post-Filteration	12/19/08	0800	6 DW 2		
2 DW-004 J	Mid-Carbon 1	12/18/08	1035	6 DW 2		
3 DW-004 I	Mid-Carbon 2	12/18/08	1040	6 DW 2		
4 DW-004 C	Pre-Filteration	12/18/08	1045	6 DW 2		
5						
6						
7						
8						

SAMPLED BY (Please Print): Cole Allen
LOGGED BY (Signature): [Signature]
REVIEWED BY (Signature): [Signature] **DATE:** 12/20/08

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
<u>[Signature]</u>	12/19	14:50	Don Henry	12/19	14:50
<u>[Signature]</u>	12/19		[Signature]	12/19	20:30
<u>[Signature]</u>	12/19	20:40	[Signature]	12/19	22:40

ALSI FIELD SERVICES:
 Custody seals Present? (if present) Seals intact? Correct sample volumes? Correct preservation? Headspace/Volatiles? Container in good condition?
 Pick-up Labor Composite Sampling Rental Equipment Other: _____

Notes: _____
No. of Coolers: _____
Therm. ID: TRZLS
Container ID: _____
Container ID: _____
Container ID: _____

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Pre-Filtration

Sample ID			DW-005A	DW-005A	DW-005A	DW-005A	DW-005A	DW-005A	DW-005A	DW-005A	DW-005A
Sample date			4/25/2013	5/21/2013	06/27/2013	07/26/2013	08/23/2013	9/13/2013	10/16/2013	11/19/2013	12/18/2013
Compound	EPA Std.	Unit									
1,1-Dichloroethane	**	ug/l	ND	ND	ND	0.22	ND	0.24J	ND	ND	0.17
1,2-Dichloroethane	5	ug/l	1.9	1.4	0.5	1.8	2.8	4.5	4.5	7.4	2.4
Acetone	**	ug/l	3.7	5.3	ND	ND	ND	10.9	9.3	18.4	ND
Benzene	5	ug/l	ND	ND	ND	ND	ND	ND	ND	0.17	0.17
Bromodichloromethane	**	ug/l	ND	ND	ND	ND	ND	0.46J	ND	ND	ND
Carbon disulfide	**	ug/l	ND	0.8	ND	ND	ND	ND	ND	ND	ND
Chloroform	**	ug/l	ND	ND	ND	ND	ND	0.82	ND	0.21	ND
Dibromochloromethane	**	ug/l	ND	ND	ND	ND	ND	0.41J	ND	ND	ND
Diethyl Ether	**	ug/l	0.49	0.41	ND	0.58	0.42	0.36J	0.5	0.74	0.42
Isopropyl Ether	**	ug/l	2	ND	0.6	1.8	2.1	3.1	3.3	4.9	ND
Methyl ethyl ketone	**	ug/l	31.3	8.6	ND	ND	ND	8.2	ND	9.5	2.4
Methyl tert-butyl ether	20	ug/l	244	199	87.2	221	331	407	366	450	243
p-Dichlorobenzene	**	ug/l	0.15	0.19	ND	ND	ND	0.13J	0.15	0.17	ND
Tert-Amyl alcohol	**	ug/l	ND	ND	ND	ND	ND	82.2	59.3	ND	46.3
Tert-Amyl Methyl Ether	**	ug/l	2.1	1.7	0.74	ND	2.8	4.5	4.3	6.4	ND
tert-Butylalcohol	**	ug/l	273	253	60.6	311	705	1220	1380	1700	622
Tetrahydrofuran	**	ug/l	54.2	10.9	ND	14.6	ND	8.8	7.6	ND	ND

Mid-Carbon 1

Sample ID			DW-005I	DW-005I	DW-005I	DW-005I	DW-005I	DW-005I	DW-005I	DW-005I	DW-005I
Sample date			4/25/2013	5/21/2013	06/27/2013	07/26/2013	08/23/2013	9/13/2013	10/16/2013	11/19/2013	12/18/2013
Compound	EPA Std.	Unit									
Acetone	**	ug/l	8.6	6.7	ND	ND	ND	ND	ND	7.9	7.6
Carbon disulfide	**	ug/l	ND	ND	0.28	0.25	0.26	ND	0.23	0.36	ND
Methyl ethyl ketone	**	ug/l	42.3	13	ND	2.2	ND	3.3	ND	11.2	ND
Methyl tert-butyl ether	20	ug/l	ND	ND	0.099	2.2	7	0.44J	ND	0.24	1.9
n-Hexane	**	ug/l	ND	ND	0.32	ND	ND	ND	ND	ND	ND
tert-Butylalcohol	**	ug/l	65.4	280	358	311	650	716	1630	1710	1430
Tetrahydrofuran	**	ug/l	36.2	18.2	4.5	14.6	12.5	15.4	23.2	14.5	8.4

Mid-Carbon 2

Sample ID			DW-005J	DW-005J	DW-005J	DW-005J	DW-005J	DW-005J	DW-005J	DW-005J	DW-005J
Sample date			4/25/2013	5/21/2013	06/27/2013	07/26/2013	08/23/2013	9/13/2013	10/16/2013	11/19/2013	12/18/2013
Compound	EPA Std.	Unit									
Acetone	**	ug/l	9.8	6.8	ND	3.2	ND	ND	ND	16.1	6.3
Carbon disulfide	**	ug/l	0.45	0.31	0.39	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	**	ug/l	97.3	11.2	ND	ND	ND	ND	ND	8.2	ND
Methyl tert-butyl ether	20	ug/l	ND	ND	ND	ND	ND	0.095J	ND	ND	ND
n-Hexane	**	ug/l	ND	ND	0.26	ND	ND	0.29J	ND	ND	ND
tert-Butylalcohol	**	ug/l	11.6	33.1	274	238	484	442	872	1480	1360
Tetrahydrofuran	**	ug/l	123	14.5	ND	7.2	5	22.9	25.4	10.1	ND

Post-Carbon

Sample ID			DW-005K	DW-005K	DW-005K	DW-005K	DW-005K	DW-005K	DW-005K	DW-005K	DW-005K
Sample date			4/25/2013	5/21/2013	06/27/2013	07/26/2013	08/23/2013	9/13/2013	10/16/2013	11/19/2013	12/18/2013
Compound	EPA Std.	Unit									
Acetone	**	ug/l	10.8	6.5	ND	ND	ND	ND	ND	7.7	ND
Carbon disulfide	**	ug/l	0.76	ND	0.56	ND	0.54	ND	ND	0.52	0.26
Methyl ethyl ketone	**	ug/l	84.3	8.6	ND	ND	1.4	11.8	ND	9	2.6
n-Hexane	**	ug/l	ND	ND	ND	ND	ND	0.39J	ND	ND	ND
tert-Butylalcohol	**	ug/l	10	9.2	50.1	205	317	2.7J	182	1010	1300
Tetrahydrofuran	**	ug/l	87.8	6.9	ND	9.4	7.8	12.5	10.2	ND	ND

December 30, 2013

Mr. James Manuel
REPSG
6901 Kingsessing Avenue
Philadelphia, PA 19142

Certificate of Analysis

Project Name: 2013-CALVERT CITGO	Workorder: 1064418
Purchase Order: 8835	Workorder ID: 2013-CALVERT CITGO PROJECT/597

Dear Mr. Manuel,

Enclosed are the analytical results for samples received by the laboratory on Thursday, December 19, 2013.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.


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ALS York: 978 Loucks Mill Road, York, PA 17402 717-505-5280

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Brenda MacPhail Kellogg

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.



Susan Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Discard Date: 01/13/2014

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
1064418001	DW-005K_20131218_N	Water	12/18/13 10:10	12/19/13 22:40	Customer
1064418002	DW-005J_20131218_N	Water	12/18/13 10:15	12/19/13 22:40	Customer
1064418003	DW-005I_20131218_N	Water	12/18/13 10:20	12/19/13 22:40	Customer
1064418004	DW-005A_20131218_N	Water	12/18/13 10:25	12/19/13 22:40	Customer

Workorder Comments:

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064418001** Date Collected: 12/18/2013 10:10 Matrix: Water
Sample ID: **DW-005K_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		5.0	2.2	EPA 524.2	12/27/13 08:08	TMP		A	
Acrylonitrile	ND	ug/L		2.5	0.88	EPA 524.2	12/27/13 08:08	TMP		A	
tert-Amyl methyl ether	ND	ug/L		0.50	0.15	EPA 524.2	12/27/13 08:08	TMP		A	
tert-Amyl Alcohol	ND	ug/L		5.0	1.6	EPA 524.2	12/27/13 08:08	TMP		A	
tert-Amyl Ethylether	ND	ug/L		0.50	0.12	EPA 524.2	12/27/13 08:08	TMP		A	
Benzene	ND	ug/L		0.50	0.070	EPA 524.2	12/27/13 08:08	TMP		A	
Bromobenzene	ND	ug/L		0.50	0.19	EPA 524.2	12/27/13 08:08	TMP		A	
Bromochloromethane	ND	ug/L		0.50	0.20	EPA 524.2	12/27/13 08:08	TMP		A	
Bromodichloromethane	ND	ug/L		0.50	0.22	EPA 524.2	12/27/13 08:08	TMP		A	
Bromoform	ND	ug/L		0.50	0.23	EPA 524.2	12/27/13 08:08	TMP		A	
Bromomethane	ND	ug/L		0.50	0.13	EPA 524.2	12/27/13 08:08	TMP		A	
2-Butanone	2.6	ug/L		2.5	1.3	EPA 524.2	12/27/13 08:08	TMP		A	
tert-Butyl Alcohol	1300	ug/L		250	70.0	EPA 524.2	12/28/13 10:01	TMP		A	
n-Butylbenzene	ND	ug/L		0.50	0.13	EPA 524.2	12/27/13 08:08	TMP		A	
tert-Butylbenzene	ND	ug/L		0.50	0.24	EPA 524.2	12/27/13 08:08	TMP		A	
sec-Butylbenzene	ND	ug/L		0.50	0.10	EPA 524.2	12/27/13 08:08	TMP		A	
Carbon Disulfide	0.26J	ug/L		0.50	0.21	EPA 524.2	12/27/13 08:08	TMP		A	
Carbon Tetrachloride	ND	ug/L		0.50	0.20	EPA 524.2	12/27/13 08:08	TMP		A	
Chloroacetonitrile	ND	ug/L		2.5	0.88	EPA 524.2	12/27/13 08:08	TMP		A	
Chlorobenzene	ND	ug/L		0.50	0.14	EPA 524.2	12/27/13 08:08	TMP		A	
1-Chlorobutane	ND	ug/L		1.0	0.28	EPA 524.2	12/27/13 08:08	TMP		A	
Chlorodibromomethane	ND	ug/L		0.50	0.18	EPA 524.2	12/27/13 08:08	TMP		A	
Chloroethane	ND	ug/L		0.50	0.24	EPA 524.2	12/27/13 08:08	TMP		A	
Chloroform	ND	ug/L		0.50	0.19	EPA 524.2	12/27/13 08:08	TMP		A	
Chloromethane	ND	ug/L		0.50	0.22	EPA 524.2	12/27/13 08:08	TMP		A	
3-Chloro-1-propene	ND	ug/L		0.50	0.17	EPA 524.2	12/27/13 08:08	TMP		A	
o-Chlorotoluene	ND	ug/L		0.50	0.23	EPA 524.2	12/27/13 08:08	TMP		A	
p-Chlorotoluene	ND	ug/L		0.50	0.16	EPA 524.2	12/27/13 08:08	TMP		A	
1,2-Dibromo-3-chloropropane	ND	ug/L		0.50	0.23	EPA 524.2	12/27/13 08:08	TMP		A	
1,2-Dibromoethane	ND	ug/L		0.50	0.15	EPA 524.2	12/27/13 08:08	TMP		A	
Dibromomethane	ND	ug/L		0.50	0.24	EPA 524.2	12/27/13 08:08	TMP		A	
trans-1,4-Dichloro-2-butene	ND	ug/L		1.0	0.27	EPA 524.2	12/27/13 08:08	TMP		A	
1,1-Dichloro-2-Propanone	ND	ug/L		12.5	2.2	EPA 524.2	12/27/13 08:08	TMP		A	
1,2-Dichlorobenzene	ND	ug/L		0.50	0.13	EPA 524.2	12/27/13 08:08	TMP		A	
1,3-Dichlorobenzene	ND	ug/L		0.50	0.11	EPA 524.2	12/27/13 08:08	TMP		A	
1,4-Dichlorobenzene	ND	ug/L		0.50	0.11	EPA 524.2	12/27/13 08:08	TMP		A	
Dichlorodifluoromethane	ND	ug/L	1	0.50	0.22	EPA 524.2	12/27/13 08:08	TMP		A	
1,1-Dichloroethane	ND	ug/L		0.50	0.11	EPA 524.2	12/27/13 08:08	TMP		A	
1,2-Dichloroethane	ND	ug/L		0.50	0.15	EPA 524.2	12/27/13 08:08	TMP		A	
1,1-Dichloroethene	ND	ug/L		0.50	0.22	EPA 524.2	12/27/13 08:08	TMP		A	

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ANALYTICAL RESULTS

Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064418001** Date Collected: 12/18/2013 10:10 Matrix: Water
Sample ID: **DW-005K_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
cis-1,2-Dichloroethene	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 08:08	TMP	A
trans-1,2-Dichloroethene	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 08:08	TMP	A
Dichlorofluoromethane	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:08	TMP	A
1,3-Dichloropropane	ND	ug/L		0.50	0.14	EPA 524.2			12/27/13 08:08	TMP	A
2,2-Dichloropropane	ND	ug/L		0.50	0.18	EPA 524.2			12/27/13 08:08	TMP	A
1,2-Dichloropropane	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 08:08	TMP	A
1,1-Dichloropropene	ND	ug/L		0.50	0.24	EPA 524.2			12/27/13 08:08	TMP	A
cis-1,3-Dichloropropene	ND	ug/L		0.50	0.15	EPA 524.2			12/27/13 08:08	TMP	A
trans-1,3-Dichloropropene	ND	ug/L		0.50	0.10	EPA 524.2			12/27/13 08:08	TMP	A
1,3-Dichloropropene, Total	ND	ug/L		1.0	0.23	EPA 524.2			12/27/13 08:08	TMP	A
Diisopropyl ether	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:08	TMP	A
1,4-Dioxane	ND	ug/L		4.0	1.5	EPA 524.2			12/27/13 08:08	TMP	A
Ethyl Ether	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:08	TMP	A
Ethyl Methacrylate	ND	ug/L		0.50	0.16	EPA 524.2			12/27/13 08:08	TMP	A
Ethyl tert-butyl ether	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 08:08	TMP	A
Ethylbenzene	ND	ug/L		0.50	0.18	EPA 524.2			12/27/13 08:08	TMP	A
Hexachlorobutadiene	ND	ug/L		0.50	0.24	EPA 524.2			12/27/13 08:08	TMP	A
Hexachloroethane	ND	ug/L		1.0	0.32	EPA 524.2			12/27/13 08:08	TMP	A
Hexane	ND	ug/L		0.50	0.22	EPA 524.2			12/27/13 08:08	TMP	A
2-Hexanone	ND	ug/L		2.5	0.82	EPA 524.2			12/27/13 08:08	TMP	A
Iodomethane	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 08:08	TMP	A
Isopropyl Alcohol	ND	ug/L		25.0	3.9	EPA 524.2			12/27/13 08:08	TMP	A
Isopropylbenzene	ND	ug/L		0.50	0.14	EPA 524.2			12/27/13 08:08	TMP	A
p-Isopropyltoluene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 08:08	TMP	A
Methacrylonitrile	ND	ug/L		1.0	0.23	EPA 524.2			12/27/13 08:08	TMP	A
Methyl methacrylate	ND	ug/L		0.50	0.20	EPA 524.2			12/27/13 08:08	TMP	A
Methyl acrylate	ND	ug/L		1.0	0.21	EPA 524.2			12/27/13 08:08	TMP	A
Methyl t-Butyl Ether	ND	ug/L		0.50	0.090	EPA 524.2			12/27/13 08:08	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		2.5	0.56	EPA 524.2			12/27/13 08:08	TMP	A
Methylene Chloride	ND	ug/L		0.50	0.32	EPA 524.2			12/27/13 08:08	TMP	A
Naphthalene	ND	ug/L		0.50	0.15	EPA 524.2			12/27/13 08:08	TMP	A
Nitrobenzene	ND	ug/L		5.0	1.8	EPA 524.2			12/27/13 08:08	TMP	A
2-Nitropropane	ND	ug/L		2.5	0.80	EPA 524.2			12/27/13 08:08	TMP	A
Pentachloroethane	ND	ug/L	2	0.50	0.23	EPA 524.2			12/27/13 08:08	TMP	A
Propionitrile	ND	ug/L		2.5	0.70	EPA 524.2			12/27/13 08:08	TMP	A
n-Propylbenzene	ND	ug/L		0.50	0.10	EPA 524.2			12/27/13 08:08	TMP	A
Styrene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 08:08	TMP	A
1,1,1,2-Tetrachloroethane	ND	ug/L		0.50	0.22	EPA 524.2			12/27/13 08:08	TMP	A
1,1,2,2-Tetrachloroethane	ND	ug/L		0.50	0.13	EPA 524.2			12/27/13 08:08	TMP	A
Tetrachloroethene	ND	ug/L		0.50	0.17	EPA 524.2			12/27/13 08:08	TMP	A
Tetrahydrofuran	ND	ug/L		2.5	0.81	EPA 524.2			12/27/13 08:08	TMP	A
Toluene	ND	ug/L		0.50	0.12	EPA 524.2			12/27/13 08:08	TMP	A

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ANALYTICAL RESULTS

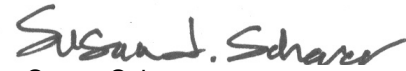
Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064418001** Date Collected: 12/18/2013 10:10 Matrix: Water
Sample ID: **DW-005K_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Xylenes	ND	ug/L		0.50	0.27	EPA 524.2			12/27/13 08:08	TMP	A
1,2,3-Trichlorobenzene	ND	ug/L		0.50	0.23	EPA 524.2			12/27/13 08:08	TMP	A
1,2,4-Trichlorobenzene	ND	ug/L		0.50	0.14	EPA 524.2			12/27/13 08:08	TMP	A
1,1,1-Trichloroethane	ND	ug/L		0.50	0.15	EPA 524.2			12/27/13 08:08	TMP	A
1,1,2-Trichloroethane	ND	ug/L		0.50	0.20	EPA 524.2			12/27/13 08:08	TMP	A
Trichloroethene	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:08	TMP	A
Trichlorofluoromethane	ND	ug/L		0.50	0.18	EPA 524.2			12/27/13 08:08	TMP	A
1,2,3-Trichloropropane	ND	ug/L		0.50	0.28	EPA 524.2			12/27/13 08:08	TMP	A
1,2,4-Trimethylbenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 08:08	TMP	A
1,3,5-Trimethylbenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 08:08	TMP	A
Vinyl Acetate	ND	ug/L	3	0.50	0.22	EPA 524.2			12/27/13 08:08	TMP	A
Vinyl Chloride	ND	ug/L	4	0.50	0.23	EPA 524.2			12/27/13 08:08	TMP	A
o-Xylene	ND	ug/L		0.50	0.12	EPA 524.2			12/27/13 08:08	TMP	A
mp-Xylene	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:08	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	100	%		70-130		EPA 524.2			12/27/13 08:08	TMP	A
4-Bromofluorobenzene (S)	81.7	%		70-130		EPA 524.2			12/27/13 08:08	TMP	A
1,2-Dichlorobenzene-d4 (S)	84	%		70-130		EPA 524.2			12/28/13 10:01	TMP	A
4-Bromofluorobenzene (S)	73.4	%		70-130		EPA 524.2			12/28/13 10:01	TMP	A

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064418002** Date Collected: 12/18/2013 10:15 Matrix: Water
Sample ID: **DW-005J_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	6.3	ug/L		5.0	2.2	EPA 524.2	12/27/13 08:34	TMP		A	
Acrylonitrile	ND	ug/L		2.5	0.88	EPA 524.2	12/27/13 08:34	TMP		A	
tert-Amyl methyl ether	ND	ug/L		0.50	0.15	EPA 524.2	12/27/13 08:34	TMP		A	
tert-Amyl Alcohol	ND	ug/L		5.0	1.6	EPA 524.2	12/27/13 08:34	TMP		A	
tert-Amyl Ethylether	ND	ug/L		0.50	0.12	EPA 524.2	12/27/13 08:34	TMP		A	
Benzene	ND	ug/L		0.50	0.070	EPA 524.2	12/27/13 08:34	TMP		A	
Bromobenzene	ND	ug/L		0.50	0.19	EPA 524.2	12/27/13 08:34	TMP		A	
Bromochloromethane	ND	ug/L		0.50	0.20	EPA 524.2	12/27/13 08:34	TMP		A	
Bromodichloromethane	ND	ug/L		0.50	0.22	EPA 524.2	12/27/13 08:34	TMP		A	
Bromoform	ND	ug/L		0.50	0.23	EPA 524.2	12/27/13 08:34	TMP		A	
Bromomethane	ND	ug/L		0.50	0.13	EPA 524.2	12/27/13 08:34	TMP		A	
2-Butanone	ND	ug/L		2.5	1.3	EPA 524.2	12/27/13 08:34	TMP		A	
tert-Butyl Alcohol	1360	ug/L		250	70.0	EPA 524.2	12/28/13 10:27	TMP		A	
n-Butylbenzene	ND	ug/L		0.50	0.13	EPA 524.2	12/27/13 08:34	TMP		A	
tert-Butylbenzene	ND	ug/L		0.50	0.24	EPA 524.2	12/27/13 08:34	TMP		A	
sec-Butylbenzene	ND	ug/L		0.50	0.10	EPA 524.2	12/27/13 08:34	TMP		A	
Carbon Disulfide	ND	ug/L		0.50	0.21	EPA 524.2	12/27/13 08:34	TMP		A	
Carbon Tetrachloride	ND	ug/L		0.50	0.20	EPA 524.2	12/27/13 08:34	TMP		A	
Chloroacetonitrile	ND	ug/L		2.5	0.88	EPA 524.2	12/27/13 08:34	TMP		A	
Chlorobenzene	ND	ug/L		0.50	0.14	EPA 524.2	12/27/13 08:34	TMP		A	
1-Chlorobutane	ND	ug/L		1.0	0.28	EPA 524.2	12/27/13 08:34	TMP		A	
Chlorodibromomethane	ND	ug/L		0.50	0.18	EPA 524.2	12/27/13 08:34	TMP		A	
Chloroethane	ND	ug/L		0.50	0.24	EPA 524.2	12/27/13 08:34	TMP		A	
Chloroform	ND	ug/L		0.50	0.19	EPA 524.2	12/27/13 08:34	TMP		A	
Chloromethane	ND	ug/L		0.50	0.22	EPA 524.2	12/27/13 08:34	TMP		A	
3-Chloro-1-propene	ND	ug/L		0.50	0.17	EPA 524.2	12/27/13 08:34	TMP		A	
o-Chlorotoluene	ND	ug/L		0.50	0.23	EPA 524.2	12/27/13 08:34	TMP		A	
p-Chlorotoluene	ND	ug/L		0.50	0.16	EPA 524.2	12/27/13 08:34	TMP		A	
1,2-Dibromo-3-chloropropane	ND	ug/L		0.50	0.23	EPA 524.2	12/27/13 08:34	TMP		A	
1,2-Dibromoethane	ND	ug/L		0.50	0.15	EPA 524.2	12/27/13 08:34	TMP		A	
Dibromomethane	ND	ug/L		0.50	0.24	EPA 524.2	12/27/13 08:34	TMP		A	
trans-1,4-Dichloro-2-butene	ND	ug/L		1.0	0.27	EPA 524.2	12/27/13 08:34	TMP		A	
1,1-Dichloro-2-Propanone	ND	ug/L		12.5	2.2	EPA 524.2	12/27/13 08:34	TMP		A	
1,2-Dichlorobenzene	ND	ug/L		0.50	0.13	EPA 524.2	12/27/13 08:34	TMP		A	
1,3-Dichlorobenzene	ND	ug/L		0.50	0.11	EPA 524.2	12/27/13 08:34	TMP		A	
1,4-Dichlorobenzene	ND	ug/L		0.50	0.11	EPA 524.2	12/27/13 08:34	TMP		A	
Dichlorodifluoromethane	ND	ug/L	1	0.50	0.22	EPA 524.2	12/27/13 08:34	TMP		A	
1,1-Dichloroethane	ND	ug/L		0.50	0.11	EPA 524.2	12/27/13 08:34	TMP		A	
1,2-Dichloroethane	ND	ug/L		0.50	0.15	EPA 524.2	12/27/13 08:34	TMP		A	
1,1-Dichloroethene	ND	ug/L		0.50	0.22	EPA 524.2	12/27/13 08:34	TMP		A	

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ANALYTICAL RESULTS

Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: 1064418002 **Date Collected:** 12/18/2013 10:15 **Matrix:** Water
Sample ID: DW-005J_20131218_N **Date Received:** 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
cis-1,2-Dichloroethene	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 08:34	TMP	A
trans-1,2-Dichloroethene	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 08:34	TMP	A
Dichlorofluoromethane	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:34	TMP	A
1,3-Dichloropropane	ND	ug/L		0.50	0.14	EPA 524.2			12/27/13 08:34	TMP	A
2,2-Dichloropropane	ND	ug/L		0.50	0.18	EPA 524.2			12/27/13 08:34	TMP	A
1,2-Dichloropropane	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 08:34	TMP	A
1,1-Dichloropropene	ND	ug/L		0.50	0.24	EPA 524.2			12/27/13 08:34	TMP	A
cis-1,3-Dichloropropene	ND	ug/L		0.50	0.15	EPA 524.2			12/27/13 08:34	TMP	A
trans-1,3-Dichloropropene	ND	ug/L		0.50	0.10	EPA 524.2			12/27/13 08:34	TMP	A
1,3-Dichloropropene, Total	ND	ug/L		1.0	0.23	EPA 524.2			12/27/13 08:34	TMP	A
Diisopropyl ether	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:34	TMP	A
1,4-Dioxane	ND	ug/L		4.0	1.5	EPA 524.2			12/27/13 08:34	TMP	A
Ethyl Ether	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:34	TMP	A
Ethyl Methacrylate	ND	ug/L		0.50	0.16	EPA 524.2			12/27/13 08:34	TMP	A
Ethyl tert-butyl ether	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 08:34	TMP	A
Ethylbenzene	ND	ug/L		0.50	0.18	EPA 524.2			12/27/13 08:34	TMP	A
Hexachlorobutadiene	ND	ug/L		0.50	0.24	EPA 524.2			12/27/13 08:34	TMP	A
Hexachloroethane	ND	ug/L		1.0	0.32	EPA 524.2			12/27/13 08:34	TMP	A
Hexane	ND	ug/L		0.50	0.22	EPA 524.2			12/27/13 08:34	TMP	A
2-Hexanone	ND	ug/L		2.5	0.82	EPA 524.2			12/27/13 08:34	TMP	A
Iodomethane	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 08:34	TMP	A
Isopropyl Alcohol	ND	ug/L		25.0	3.9	EPA 524.2			12/27/13 08:34	TMP	A
Isopropylbenzene	ND	ug/L		0.50	0.14	EPA 524.2			12/27/13 08:34	TMP	A
p-Isopropyltoluene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 08:34	TMP	A
Methacrylonitrile	ND	ug/L		1.0	0.23	EPA 524.2			12/27/13 08:34	TMP	A
Methyl methacrylate	ND	ug/L		0.50	0.20	EPA 524.2			12/27/13 08:34	TMP	A
Methyl acrylate	ND	ug/L		1.0	0.21	EPA 524.2			12/27/13 08:34	TMP	A
Methyl t-Butyl Ether	ND	ug/L		0.50	0.090	EPA 524.2			12/27/13 08:34	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		2.5	0.56	EPA 524.2			12/27/13 08:34	TMP	A
Methylene Chloride	ND	ug/L		0.50	0.32	EPA 524.2			12/27/13 08:34	TMP	A
Naphthalene	ND	ug/L		0.50	0.15	EPA 524.2			12/27/13 08:34	TMP	A
Nitrobenzene	ND	ug/L		5.0	1.8	EPA 524.2			12/27/13 08:34	TMP	A
2-Nitropropane	ND	ug/L		2.5	0.80	EPA 524.2			12/27/13 08:34	TMP	A
Pentachloroethane	ND	ug/L	2	0.50	0.23	EPA 524.2			12/27/13 08:34	TMP	A
Propionitrile	ND	ug/L		2.5	0.70	EPA 524.2			12/27/13 08:34	TMP	A
n-Propylbenzene	ND	ug/L		0.50	0.10	EPA 524.2			12/27/13 08:34	TMP	A
Styrene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 08:34	TMP	A
1,1,1,2-Tetrachloroethane	ND	ug/L		0.50	0.22	EPA 524.2			12/27/13 08:34	TMP	A
1,1,2,2-Tetrachloroethane	ND	ug/L		0.50	0.13	EPA 524.2			12/27/13 08:34	TMP	A
Tetrachloroethene	ND	ug/L		0.50	0.17	EPA 524.2			12/27/13 08:34	TMP	A
Tetrahydrofuran	ND	ug/L		2.5	0.81	EPA 524.2			12/27/13 08:34	TMP	A
Toluene	ND	ug/L		0.50	0.12	EPA 524.2			12/27/13 08:34	TMP	A

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ANALYTICAL RESULTS


Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: 1064418002	Date Collected: 12/18/2013 10:15	Matrix: Water
Sample ID: DW-005J_20131218_N	Date Received: 12/19/2013 22:40	

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Xylenes	ND	ug/L		0.50	0.27	EPA 524.2			12/27/13 08:34	TMP	A
1,2,3-Trichlorobenzene	ND	ug/L		0.50	0.23	EPA 524.2			12/27/13 08:34	TMP	A
1,2,4-Trichlorobenzene	ND	ug/L		0.50	0.14	EPA 524.2			12/27/13 08:34	TMP	A
1,1,1-Trichloroethane	ND	ug/L		0.50	0.15	EPA 524.2			12/27/13 08:34	TMP	A
1,1,2-Trichloroethane	ND	ug/L		0.50	0.20	EPA 524.2			12/27/13 08:34	TMP	A
Trichloroethene	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:34	TMP	A
Trichlorofluoromethane	ND	ug/L		0.50	0.18	EPA 524.2			12/27/13 08:34	TMP	A
1,2,3-Trichloropropane	ND	ug/L		0.50	0.28	EPA 524.2			12/27/13 08:34	TMP	A
1,2,4-Trimethylbenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 08:34	TMP	A
1,3,5-Trimethylbenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 08:34	TMP	A
Vinyl Acetate	ND	ug/L	3	0.50	0.22	EPA 524.2			12/27/13 08:34	TMP	A
Vinyl Chloride	ND	ug/L	4	0.50	0.23	EPA 524.2			12/27/13 08:34	TMP	A
o-Xylene	ND	ug/L		0.50	0.12	EPA 524.2			12/27/13 08:34	TMP	A
mp-Xylene	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:34	TMP	A
Surrogate Recoveries	Results	Units	Footnotes	Limits		Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichlorobenzene-d4 (S)	81.4	%		70-130		EPA 524.2			12/27/13 08:34	TMP	A
4-Bromofluorobenzene (S)	72.4	%		70-130		EPA 524.2			12/27/13 08:34	TMP	A
1,2-Dichlorobenzene-d4 (S)	82.7	%		70-130		EPA 524.2			12/28/13 10:27	TMP	A
4-Bromofluorobenzene (S)	73.5	%		70-130		EPA 524.2			12/28/13 10:27	TMP	A

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


 Susan Scherer
 Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064418003** Date Collected: 12/18/2013 10:20 Matrix: Water
Sample ID: **DW-005I_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	7.6	ug/L		5.0	2.2	EPA 524.2			12/27/13 09:25	TMP	A
Acrylonitrile	ND	ug/L		2.5	0.88	EPA 524.2			12/27/13 09:25	TMP	A
tert-Amyl methyl ether	ND	ug/L		0.50	0.15	EPA 524.2			12/27/13 09:25	TMP	A
tert-Amyl Alcohol	ND	ug/L		5.0	1.6	EPA 524.2			12/27/13 09:25	TMP	A
tert-Amyl Ethylether	ND	ug/L		0.50	0.12	EPA 524.2			12/27/13 09:25	TMP	A
Benzene	ND	ug/L		0.50	0.070	EPA 524.2			12/27/13 09:25	TMP	A
Bromobenzene	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 09:25	TMP	A
Bromochloromethane	ND	ug/L		0.50	0.20	EPA 524.2			12/27/13 09:25	TMP	A
Bromodichloromethane	ND	ug/L		0.50	0.22	EPA 524.2			12/27/13 09:25	TMP	A
Bromoform	ND	ug/L		0.50	0.23	EPA 524.2			12/27/13 09:25	TMP	A
Bromomethane	ND	ug/L		0.50	0.13	EPA 524.2			12/27/13 09:25	TMP	A
2-Butanone	ND	ug/L		2.5	1.3	EPA 524.2			12/27/13 09:25	TMP	A
tert-Butyl Alcohol	1430	ug/L		250	70.0	EPA 524.2			12/28/13 10:52	TMP	A
n-Butylbenzene	ND	ug/L		0.50	0.13	EPA 524.2			12/27/13 09:25	TMP	A
tert-Butylbenzene	ND	ug/L		0.50	0.24	EPA 524.2			12/27/13 09:25	TMP	A
sec-Butylbenzene	ND	ug/L		0.50	0.10	EPA 524.2			12/27/13 09:25	TMP	A
Carbon Disulfide	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 09:25	TMP	A
Carbon Tetrachloride	ND	ug/L		0.50	0.20	EPA 524.2			12/27/13 09:25	TMP	A
Chloroacetonitrile	ND	ug/L		2.5	0.88	EPA 524.2			12/27/13 09:25	TMP	A
Chlorobenzene	ND	ug/L		0.50	0.14	EPA 524.2			12/27/13 09:25	TMP	A
1-Chlorobutane	ND	ug/L		1.0	0.28	EPA 524.2			12/27/13 09:25	TMP	A
Chlorodibromomethane	ND	ug/L		0.50	0.18	EPA 524.2			12/27/13 09:25	TMP	A
Chloroethane	ND	ug/L		0.50	0.24	EPA 524.2			12/27/13 09:25	TMP	A
Chloroform	ND	ug/L		0.50	0.19	EPA 524.2			12/27/13 09:25	TMP	A
Chloromethane	ND	ug/L		0.50	0.22	EPA 524.2			12/27/13 09:25	TMP	A
3-Chloro-1-propene	ND	ug/L		0.50	0.17	EPA 524.2			12/27/13 09:25	TMP	A
o-Chlorotoluene	ND	ug/L		0.50	0.23	EPA 524.2			12/27/13 09:25	TMP	A
p-Chlorotoluene	ND	ug/L		0.50	0.16	EPA 524.2			12/27/13 09:25	TMP	A
1,2-Dibromo-3-chloropropane	ND	ug/L		0.50	0.23	EPA 524.2			12/27/13 09:25	TMP	A
1,2-Dibromoethane	ND	ug/L		0.50	0.15	EPA 524.2			12/27/13 09:25	TMP	A
Dibromomethane	ND	ug/L		0.50	0.24	EPA 524.2			12/27/13 09:25	TMP	A
trans-1,4-Dichloro-2-butene	ND	ug/L		1.0	0.27	EPA 524.2			12/27/13 09:25	TMP	A
1,1-Dichloro-2-Propanone	ND	ug/L		12.5	2.2	EPA 524.2			12/27/13 09:25	TMP	A
1,2-Dichlorobenzene	ND	ug/L		0.50	0.13	EPA 524.2			12/27/13 09:25	TMP	A
1,3-Dichlorobenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 09:25	TMP	A
1,4-Dichlorobenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 09:25	TMP	A
Dichlorodifluoromethane	ND	ug/L	1	0.50	0.22	EPA 524.2			12/27/13 09:25	TMP	A
1,1-Dichloroethane	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 09:25	TMP	A
1,2-Dichloroethane	ND	ug/L		0.50	0.15	EPA 524.2			12/27/13 09:25	TMP	A
1,1-Dichloroethene	ND	ug/L		0.50	0.22	EPA 524.2			12/27/13 09:25	TMP	A

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ANALYTICAL RESULTS

Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064418003** Date Collected: 12/18/2013 10:20 Matrix: Water
Sample ID: **DW-005I_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
cis-1,2-Dichloroethene	ND	ug/L		0.50	0.19	EPA 524.2		12/27/13 09:25	TMP	A
trans-1,2-Dichloroethene	ND	ug/L		0.50	0.19	EPA 524.2		12/27/13 09:25	TMP	A
Dichlorofluoromethane	ND	ug/L		0.50	0.21	EPA 524.2		12/27/13 09:25	TMP	A
1,3-Dichloropropane	ND	ug/L		0.50	0.14	EPA 524.2		12/27/13 09:25	TMP	A
2,2-Dichloropropane	ND	ug/L		0.50	0.18	EPA 524.2		12/27/13 09:25	TMP	A
1,2-Dichloropropane	ND	ug/L		0.50	0.19	EPA 524.2		12/27/13 09:25	TMP	A
1,1-Dichloropropene	ND	ug/L		0.50	0.24	EPA 524.2		12/27/13 09:25	TMP	A
cis-1,3-Dichloropropene	ND	ug/L		0.50	0.15	EPA 524.2		12/27/13 09:25	TMP	A
trans-1,3-Dichloropropene	ND	ug/L		0.50	0.10	EPA 524.2		12/27/13 09:25	TMP	A
1,3-Dichloropropene, Total	ND	ug/L		1.0	0.23	EPA 524.2		12/27/13 09:25	TMP	A
Diisopropyl ether	ND	ug/L		0.50	0.21	EPA 524.2		12/27/13 09:25	TMP	A
1,4-Dioxane	ND	ug/L		4.0	1.5	EPA 524.2		12/27/13 09:25	TMP	A
Ethyl Ether	ND	ug/L		0.50	0.21	EPA 524.2		12/27/13 09:25	TMP	A
Ethyl Methacrylate	ND	ug/L		0.50	0.16	EPA 524.2		12/27/13 09:25	TMP	A
Ethyl tert-butyl ether	ND	ug/L		0.50	0.19	EPA 524.2		12/27/13 09:25	TMP	A
Ethylbenzene	ND	ug/L		0.50	0.18	EPA 524.2		12/27/13 09:25	TMP	A
Hexachlorobutadiene	ND	ug/L		0.50	0.24	EPA 524.2		12/27/13 09:25	TMP	A
Hexachloroethane	ND	ug/L		1.0	0.32	EPA 524.2		12/27/13 09:25	TMP	A
Hexane	ND	ug/L		0.50	0.22	EPA 524.2		12/27/13 09:25	TMP	A
2-Hexanone	ND	ug/L		2.5	0.82	EPA 524.2		12/27/13 09:25	TMP	A
Iodomethane	ND	ug/L		0.50	0.19	EPA 524.2		12/27/13 09:25	TMP	A
Isopropyl Alcohol	ND	ug/L		25.0	3.9	EPA 524.2		12/27/13 09:25	TMP	A
Isopropylbenzene	ND	ug/L		0.50	0.14	EPA 524.2		12/27/13 09:25	TMP	A
p-Isopropyltoluene	ND	ug/L		0.50	0.11	EPA 524.2		12/27/13 09:25	TMP	A
Methacrylonitrile	ND	ug/L		1.0	0.23	EPA 524.2		12/27/13 09:25	TMP	A
Methyl methacrylate	ND	ug/L		0.50	0.20	EPA 524.2		12/27/13 09:25	TMP	A
Methyl acrylate	ND	ug/L		1.0	0.21	EPA 524.2		12/27/13 09:25	TMP	A
Methyl t-Butyl Ether	1.9	ug/L		0.50	0.090	EPA 524.2		12/27/13 09:25	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		2.5	0.56	EPA 524.2		12/27/13 09:25	TMP	A
Methylene Chloride	ND	ug/L		0.50	0.32	EPA 524.2		12/27/13 09:25	TMP	A
Naphthalene	ND	ug/L		0.50	0.15	EPA 524.2		12/27/13 09:25	TMP	A
Nitrobenzene	ND	ug/L		5.0	1.8	EPA 524.2		12/27/13 09:25	TMP	A
2-Nitropropane	ND	ug/L		2.5	0.80	EPA 524.2		12/27/13 09:25	TMP	A
Pentachloroethane	ND	ug/L	2	0.50	0.23	EPA 524.2		12/27/13 09:25	TMP	A
Propionitrile	ND	ug/L		2.5	0.70	EPA 524.2		12/27/13 09:25	TMP	A
n-Propylbenzene	ND	ug/L		0.50	0.10	EPA 524.2		12/27/13 09:25	TMP	A
Styrene	ND	ug/L		0.50	0.11	EPA 524.2		12/27/13 09:25	TMP	A
1,1,1,2-Tetrachloroethane	ND	ug/L		0.50	0.22	EPA 524.2		12/27/13 09:25	TMP	A
1,1,2,2-Tetrachloroethane	ND	ug/L		0.50	0.13	EPA 524.2		12/27/13 09:25	TMP	A
Tetrachloroethene	ND	ug/L		0.50	0.17	EPA 524.2		12/27/13 09:25	TMP	A
Tetrahydrofuran	8.4	ug/L		2.5	0.81	EPA 524.2		12/27/13 09:25	TMP	A
Toluene	ND	ug/L		0.50	0.12	EPA 524.2		12/27/13 09:25	TMP	A

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ANALYTICAL RESULTS


Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064418003** Date Collected: 12/18/2013 10:20 Matrix: Water
Sample ID: **DW-005I_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Xylenes	ND	ug/L		0.50	0.27	EPA 524.2			12/27/13 09:25	TMP	A
1,2,3-Trichlorobenzene	ND	ug/L		0.50	0.23	EPA 524.2			12/27/13 09:25	TMP	A
1,2,4-Trichlorobenzene	ND	ug/L		0.50	0.14	EPA 524.2			12/27/13 09:25	TMP	A
1,1,1-Trichloroethane	ND	ug/L		0.50	0.15	EPA 524.2			12/27/13 09:25	TMP	A
1,1,2-Trichloroethane	ND	ug/L		0.50	0.20	EPA 524.2			12/27/13 09:25	TMP	A
Trichloroethene	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 09:25	TMP	A
Trichlorofluoromethane	ND	ug/L		0.50	0.18	EPA 524.2			12/27/13 09:25	TMP	A
1,2,3-Trichloropropane	ND	ug/L		0.50	0.28	EPA 524.2			12/27/13 09:25	TMP	A
1,2,4-Trimethylbenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 09:25	TMP	A
1,3,5-Trimethylbenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 09:25	TMP	A
Vinyl Acetate	ND	ug/L	3	0.50	0.22	EPA 524.2			12/27/13 09:25	TMP	A
Vinyl Chloride	ND	ug/L	4	0.50	0.23	EPA 524.2			12/27/13 09:25	TMP	A
o-Xylene	ND	ug/L		0.50	0.12	EPA 524.2			12/27/13 09:25	TMP	A
mp-Xylene	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 09:25	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	88.6	%		70-130		EPA 524.2			12/27/13 09:25	TMP	A
4-Bromofluorobenzene (S)	79	%		70-130		EPA 524.2			12/27/13 09:25	TMP	A
1,2-Dichlorobenzene-d4 (S)	78.3	%		70-130		EPA 524.2			12/28/13 10:52	TMP	A
4-Bromofluorobenzene (S)	74	%		70-130		EPA 524.2			12/28/13 10:52	TMP	A

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064418004** Date Collected: 12/18/2013 10:25 Matrix: Water
Sample ID: **DW-005A_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		5.0	2.2	EPA 524.2	12/27/13	08:59	TMP	A	
Acrylonitrile	ND	ug/L		2.5	0.88	EPA 524.2	12/27/13	08:59	TMP	A	
tert-Amyl methyl ether	ND	ug/L		0.50	0.15	EPA 524.2	12/27/13	08:59	TMP	A	
tert-Amyl Alcohol	46.3	ug/L		5.0	1.6	EPA 524.2	12/27/13	08:59	TMP	A	
tert-Amyl Ethylether	ND	ug/L		0.50	0.12	EPA 524.2	12/27/13	08:59	TMP	A	
Benzene	0.17J	ug/L		0.50	0.070	EPA 524.2	12/27/13	08:59	TMP	A	
Bromobenzene	ND	ug/L		0.50	0.19	EPA 524.2	12/27/13	08:59	TMP	A	
Bromochloromethane	ND	ug/L		0.50	0.20	EPA 524.2	12/27/13	08:59	TMP	A	
Bromodichloromethane	ND	ug/L		0.50	0.22	EPA 524.2	12/27/13	08:59	TMP	A	
Bromoform	ND	ug/L		0.50	0.23	EPA 524.2	12/27/13	08:59	TMP	A	
Bromomethane	ND	ug/L		0.50	0.13	EPA 524.2	12/27/13	08:59	TMP	A	
2-Butanone	2.4J	ug/L		2.5	1.3	EPA 524.2	12/27/13	08:59	TMP	A	
tert-Butyl Alcohol	622	ug/L		125	35.0	EPA 524.2	12/28/13	11:18	TMP	A	
n-Butylbenzene	ND	ug/L		0.50	0.13	EPA 524.2	12/27/13	08:59	TMP	A	
tert-Butylbenzene	ND	ug/L		0.50	0.24	EPA 524.2	12/27/13	08:59	TMP	A	
sec-Butylbenzene	ND	ug/L		0.50	0.10	EPA 524.2	12/27/13	08:59	TMP	A	
Carbon Disulfide	ND	ug/L		0.50	0.21	EPA 524.2	12/27/13	08:59	TMP	A	
Carbon Tetrachloride	ND	ug/L		0.50	0.20	EPA 524.2	12/27/13	08:59	TMP	A	
Chloroacetonitrile	ND	ug/L		2.5	0.88	EPA 524.2	12/27/13	08:59	TMP	A	
Chlorobenzene	ND	ug/L		0.50	0.14	EPA 524.2	12/27/13	08:59	TMP	A	
1-Chlorobutane	ND	ug/L		1.0	0.28	EPA 524.2	12/27/13	08:59	TMP	A	
Chlorodibromomethane	ND	ug/L		0.50	0.18	EPA 524.2	12/27/13	08:59	TMP	A	
Chloroethane	ND	ug/L		0.50	0.24	EPA 524.2	12/27/13	08:59	TMP	A	
Chloroform	ND	ug/L		0.50	0.19	EPA 524.2	12/27/13	08:59	TMP	A	
Chloromethane	ND	ug/L		0.50	0.22	EPA 524.2	12/27/13	08:59	TMP	A	
3-Chloro-1-propene	ND	ug/L		0.50	0.17	EPA 524.2	12/27/13	08:59	TMP	A	
o-Chlorotoluene	ND	ug/L		0.50	0.23	EPA 524.2	12/27/13	08:59	TMP	A	
p-Chlorotoluene	ND	ug/L		0.50	0.16	EPA 524.2	12/27/13	08:59	TMP	A	
1,2-Dibromo-3-chloropropane	ND	ug/L		0.50	0.23	EPA 524.2	12/27/13	08:59	TMP	A	
1,2-Dibromoethane	ND	ug/L		0.50	0.15	EPA 524.2	12/27/13	08:59	TMP	A	
Dibromomethane	ND	ug/L		0.50	0.24	EPA 524.2	12/27/13	08:59	TMP	A	
trans-1,4-Dichloro-2-butene	ND	ug/L		1.0	0.27	EPA 524.2	12/27/13	08:59	TMP	A	
1,1-Dichloro-2-Propanone	ND	ug/L		12.5	2.2	EPA 524.2	12/27/13	08:59	TMP	A	
1,2-Dichlorobenzene	ND	ug/L		0.50	0.13	EPA 524.2	12/27/13	08:59	TMP	A	
1,3-Dichlorobenzene	ND	ug/L		0.50	0.11	EPA 524.2	12/27/13	08:59	TMP	A	
1,4-Dichlorobenzene	ND	ug/L		0.50	0.11	EPA 524.2	12/27/13	08:59	TMP	A	
Dichlorodifluoromethane	ND	ug/L	1	0.50	0.22	EPA 524.2	12/27/13	08:59	TMP	A	
1,1-Dichloroethane	0.17J	ug/L		0.50	0.11	EPA 524.2	12/27/13	08:59	TMP	A	
1,2-Dichloroethane	2.4	ug/L		0.50	0.15	EPA 524.2	12/27/13	08:59	TMP	A	
1,1-Dichloroethene	ND	ug/L		0.50	0.22	EPA 524.2	12/27/13	08:59	TMP	A	

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ANALYTICAL RESULTS

Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064418004** Date Collected: 12/18/2013 10:25 Matrix: Water
Sample ID: **DW-005A_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
cis-1,2-Dichloroethene	ND	ug/L		0.50	0.19	EPA 524.2		12/27/13 08:59	TMP	A
trans-1,2-Dichloroethene	ND	ug/L		0.50	0.19	EPA 524.2		12/27/13 08:59	TMP	A
Dichlorofluoromethane	ND	ug/L		0.50	0.21	EPA 524.2		12/27/13 08:59	TMP	A
1,3-Dichloropropane	ND	ug/L		0.50	0.14	EPA 524.2		12/27/13 08:59	TMP	A
2,2-Dichloropropane	ND	ug/L		0.50	0.18	EPA 524.2		12/27/13 08:59	TMP	A
1,2-Dichloropropane	ND	ug/L		0.50	0.19	EPA 524.2		12/27/13 08:59	TMP	A
1,1-Dichloropropene	ND	ug/L		0.50	0.24	EPA 524.2		12/27/13 08:59	TMP	A
cis-1,3-Dichloropropene	ND	ug/L		0.50	0.15	EPA 524.2		12/27/13 08:59	TMP	A
trans-1,3-Dichloropropene	ND	ug/L		0.50	0.10	EPA 524.2		12/27/13 08:59	TMP	A
1,3-Dichloropropene, Total	ND	ug/L		1.0	0.23	EPA 524.2		12/27/13 08:59	TMP	A
Diisopropyl ether	ND	ug/L		0.50	0.21	EPA 524.2		12/27/13 08:59	TMP	A
1,4-Dioxane	ND	ug/L		4.0	1.5	EPA 524.2		12/27/13 08:59	TMP	A
Ethyl Ether	0.42J	ug/L		0.50	0.21	EPA 524.2		12/27/13 08:59	TMP	A
Ethyl Methacrylate	ND	ug/L		0.50	0.16	EPA 524.2		12/27/13 08:59	TMP	A
Ethyl tert-butyl ether	ND	ug/L		0.50	0.19	EPA 524.2		12/27/13 08:59	TMP	A
Ethylbenzene	ND	ug/L		0.50	0.18	EPA 524.2		12/27/13 08:59	TMP	A
Hexachlorobutadiene	ND	ug/L		0.50	0.24	EPA 524.2		12/27/13 08:59	TMP	A
Hexachloroethane	ND	ug/L		1.0	0.32	EPA 524.2		12/27/13 08:59	TMP	A
Hexane	ND	ug/L		0.50	0.22	EPA 524.2		12/27/13 08:59	TMP	A
2-Hexanone	ND	ug/L		2.5	0.82	EPA 524.2		12/27/13 08:59	TMP	A
Iodomethane	ND	ug/L		0.50	0.19	EPA 524.2		12/27/13 08:59	TMP	A
Isopropyl Alcohol	ND	ug/L		25.0	3.9	EPA 524.2		12/27/13 08:59	TMP	A
Isopropylbenzene	ND	ug/L		0.50	0.14	EPA 524.2		12/27/13 08:59	TMP	A
p-Isopropyltoluene	ND	ug/L		0.50	0.11	EPA 524.2		12/27/13 08:59	TMP	A
Methacrylonitrile	ND	ug/L		1.0	0.23	EPA 524.2		12/27/13 08:59	TMP	A
Methyl methacrylate	ND	ug/L		0.50	0.20	EPA 524.2		12/27/13 08:59	TMP	A
Methyl acrylate	ND	ug/L		1.0	0.21	EPA 524.2		12/27/13 08:59	TMP	A
Methyl t-Butyl Ether	243	ug/L		12.5	2.3	EPA 524.2		12/28/13 11:18	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		2.5	0.56	EPA 524.2		12/27/13 08:59	TMP	A
Methylene Chloride	ND	ug/L		0.50	0.32	EPA 524.2		12/27/13 08:59	TMP	A
Naphthalene	ND	ug/L		0.50	0.15	EPA 524.2		12/27/13 08:59	TMP	A
Nitrobenzene	ND	ug/L		5.0	1.8	EPA 524.2		12/27/13 08:59	TMP	A
2-Nitropropane	ND	ug/L		2.5	0.80	EPA 524.2		12/27/13 08:59	TMP	A
Pentachloroethane	ND	ug/L	2	0.50	0.23	EPA 524.2		12/27/13 08:59	TMP	A
Propionitrile	ND	ug/L		2.5	0.70	EPA 524.2		12/27/13 08:59	TMP	A
n-Propylbenzene	ND	ug/L		0.50	0.10	EPA 524.2		12/27/13 08:59	TMP	A
Styrene	ND	ug/L		0.50	0.11	EPA 524.2		12/27/13 08:59	TMP	A
1,1,1,2-Tetrachloroethane	ND	ug/L		0.50	0.22	EPA 524.2		12/27/13 08:59	TMP	A
1,1,2,2-Tetrachloroethane	ND	ug/L		0.50	0.13	EPA 524.2		12/27/13 08:59	TMP	A
Tetrachloroethene	ND	ug/L		0.50	0.17	EPA 524.2		12/27/13 08:59	TMP	A
Tetrahydrofuran	ND	ug/L		2.5	0.81	EPA 524.2		12/27/13 08:59	TMP	A
Toluene	ND	ug/L		0.50	0.12	EPA 524.2		12/27/13 08:59	TMP	A

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ANALYTICAL RESULTS


Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064418004** Date Collected: 12/18/2013 10:25 Matrix: Water
Sample ID: **DW-005A_20131218_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Xylenes	ND	ug/L		0.50	0.27	EPA 524.2			12/27/13 08:59	TMP	A
1,2,3-Trichlorobenzene	ND	ug/L		0.50	0.23	EPA 524.2			12/27/13 08:59	TMP	A
1,2,4-Trichlorobenzene	ND	ug/L		0.50	0.14	EPA 524.2			12/27/13 08:59	TMP	A
1,1,1-Trichloroethane	ND	ug/L		0.50	0.15	EPA 524.2			12/27/13 08:59	TMP	A
1,1,2-Trichloroethane	ND	ug/L		0.50	0.20	EPA 524.2			12/27/13 08:59	TMP	A
Trichloroethene	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:59	TMP	A
Trichlorofluoromethane	ND	ug/L		0.50	0.18	EPA 524.2			12/27/13 08:59	TMP	A
1,2,3-Trichloropropane	ND	ug/L		0.50	0.28	EPA 524.2			12/27/13 08:59	TMP	A
1,2,4-Trimethylbenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 08:59	TMP	A
1,3,5-Trimethylbenzene	ND	ug/L		0.50	0.11	EPA 524.2			12/27/13 08:59	TMP	A
Vinyl Acetate	ND	ug/L	3	0.50	0.22	EPA 524.2			12/27/13 08:59	TMP	A
Vinyl Chloride	ND	ug/L	4	0.50	0.23	EPA 524.2			12/27/13 08:59	TMP	A
o-Xylene	ND	ug/L		0.50	0.12	EPA 524.2			12/27/13 08:59	TMP	A
mp-Xylene	ND	ug/L		0.50	0.21	EPA 524.2			12/27/13 08:59	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	80.8	%		70-130		EPA 524.2			12/27/13 08:59	TMP	A
4-Bromofluorobenzene (S)	75.1	%		70-130		EPA 524.2			12/27/13 08:59	TMP	A
1,2-Dichlorobenzene-d4 (S)	80.2	%		70-130		EPA 524.2			12/28/13 11:18	TMP	A
4-Bromofluorobenzene (S)	75.4	%		70-130		EPA 524.2			12/28/13 11:18	TMP	A

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 1064418 2013-CALVERT CITGO PROJECT/597

PARAMETER QUALIFIERS\FLAGS

- [1] The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Dichlorodifluoromethane. The % Recovery was reported as 60.1 and the control limits were 70 to 130.
- [2] The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Pentachloroethane. The % Recovery was reported as 69.6 and the control limits were 70 to 130.
- [3] The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Vinyl Acetate. The % Recovery was reported as 60.5 and the control limits were 70 to 130.
- [4] The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Vinyl Chloride. The % Recovery was reported as 68 and the control limits were 70 to 130.

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Analytical Chemistry Report

Calvert Citgo 2815 Northeast Rd North East, Maryland

Project No.: 005977

Matrix: Water

Sample Dates: 12/17/2013-12/18/2013

Regulatory Standard*:

Maryland Department of the Environment (MDE) Voluntary Cleanup Program (VCP): Generic Numeric Cleanup Standards for Groundwater for Type I & II Aquifers, Tables 1 and 2 (March 2008).

Constituent	Unit	*Standard	Location: Date: Depth (ft):	MP-001 12/18/2013 0	MP-002 12/18/2013 0	MW-001 12/17/2013 0	MW-001R 12/17/2013 0	MW-002 12/17/2013 0	MW-003 12/17/2013 0
<i>Not Otherwise Specified</i>									
DBCP	ug/l	0.2		<15U#	<7.5U#	<1.5U#	<7.5U#	<1.5U#	<7.5U#
Dichlorofluoromethane	ug/l	**		<3.7U	<1.9U	<0.37U	<1.9U	<0.37U	<1.9U
Tert-Amyl Methyl Ether	ug/l	**		<2U	<1U	<0.2U	<1U	<0.2U	<1U
<i>Volatile Organic Compounds (VOCs)</i>									
1,1,1-trichloroethane	ug/l	200		<2.2U	<1.1U	<0.22U	<1.1U	<0.22U	<1.1U
1,1,2,2-Tetrachloroethane	ug/l	0.053		<3.4U#	<1.7U#	<0.34U#	<1.7U#	<0.34U#	<1.7U#
1,1,2-Trichloroethane	ug/l	5		<3.3U	<1.7U	<0.33U	<1.7U	<0.33U	<1.7U
1,1-Dichloroethane	ug/l	90		<2.8U	<1.4U	<0.28U	<1.4U	<0.28U	<1.4U
1,1-Dichloroethylene	ug/l	7		<2.9U	<1.5U	<0.29U	<1.5U	<0.29U	<1.5U
1,2-Dibromoethane	ug/l	0.05		<2.8U#	<1.4U#	<0.28U#	<1.4U#	<0.28U#	<1.4U#
1,2-Dichloroethane	ug/l	5		<3.2U	<1.6U	1.1	118	<0.32U	<1.6U
1,2-Dichloropropane	ug/l	5		<2.4U	<1.2U	<0.24U	<1.2U	<0.24U	<1.2U
2-Hexanone	ug/l	**		<13U	<6.5U	<1.3U	<6.5U	<1.3U	<6.5U
Acetone	ug/l	550		<31U	<15.5U	<3.1U	<15.5U	<3.1U	50.1
Benzene	ug/l	5		423	220	132	21.7	13.5	31.9
Bromodichloromethane	ug/l	80		<2.7U	<1.4U	<0.27U	<1.4U	<0.27U	<1.4U
Bromoform	ug/l	80		<4U	<2U	<0.4U	<2U	<0.4U	<2U
Carbon disulfide	ug/l	100		<2.3U	<1.2U	0.3J	<1.2U	<0.23U	<1.2U
Carbon tetrachloride	ug/l	5		<3.1U	<1.6U	<0.31U	<1.6U	<0.31U	<1.6U

Print Date: 01/02/2014

Page 1

** No Applicable Regulatory Standard

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Analytical Chemistry Report

Calvert Citgo 2815 Northeast Rd North East, Maryland

Project No.: 005977

Matrix: Water

Sample Dates: 12/17/2013-12/18/2013

Regulatory Standard*:

Maryland Department of the Environment (MDE) Voluntary Cleanup Program (VCP): Generic Numeric Cleanup Standards for Groundwater for Type I & II Aquifers, Tables 1 and 2 (March 2008).

Constituent	Unit	*Standard	Location:	MP-001	MP-002	MW-001	MW-001R	MW-002	MW-003
			Date:	12/18/2013	12/18/2013	12/17/2013	12/17/2013	12/17/2013	12/17/2013
			Depth (ft):	0	0	0	0	0	0
Chlorobenzene	ug/l	100		<1.9U	<0.95U	<0.19U	<0.95U	<0.19U	<0.95U
Chlorobromomethane	ug/l	**		<3.2U	<1.6U	<0.32U	<1.6U	<0.32U	<1.6U
Chloroethane	ug/l	3.6		<3.3U	<1.7U	<0.33U	<1.7U	<0.33U	<1.7U
Chloroform	ug/l	80		<2.1U	<1.1U	<0.21U	<1.1U	<0.21U	<1.1U
cis-1,2-Dichloroethylene	ug/l	70		<3.2U	<1.6U	<0.32U	<1.6U	<0.32U	<1.6U
cis-1,3-Dichloropropene	ug/l	0.44		<3.1U#	<1.6U#	<0.31U	<1.6U#	<0.31U	<1.6U#
Dibromochloromethane	ug/l	80		<4.5U	<2.3U	<0.45U	<2.3U	<0.45U	<2.3U
Dichlorodifluoromethane	ug/l	**		<3.3U	<1.7U	<0.33U	<1.7U	<0.33U	<1.7U
Ethyl tert-butyl ether	ug/l	**		<1.9U	<0.95U	<0.19U	<0.95U	<0.19U	<0.95U
Ethylbenzene	ug/l	700		<3.4U	<1.7U	4.8	<1.7U	2.8	785
Isopropyl Ether	ug/l	**		138	68.2	0.49J	26.4	<0.25U	2.9J
m/p-xylene	ug/l	**		93.8	63	12.4	8.9J	14.5	2480
Methyl bromide	ug/l	0.85		<3.9U#	<2U#	<0.39U	<2U#	<0.39U	<2U#
Methyl chloride	ug/l	19		63	<1.6U	<0.31U	<1.6U	<0.31U	3.9J
Methyl ethyl ketone	ug/l	700		<18U	<9U	<1.8U	<9U	<1.8U	13.9J
Methyl isobutylketone (MIBK)	ug/l	630		<15U	<7.5U	<1.5U	<7.5U	<1.5U	<7.5U
Methyl tert-butyl ether	ug/l	20		83.2	32.6	<0.33U	80.4	9.4	1.7J
Methylene chloride	ug/l	5		<4.5U	<2.3U	<0.45U	<2.3U	<0.45U	<2.3U
o-Xylene	ug/l	**		50.8	32.7	2.1	<1.7U	5.6	1330
Styrene	ug/l	100		<2.4U	<1.2U	<0.24U	<1.2U	<0.24U	<1.2U
Tert-Amyl alcohol	ug/l	**		438	613	53.1	1130	<6.6U	47.9J

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Analytical Chemistry Report

Calvert Citgo 2815 Northeast Rd North East, Maryland

Project No.: 005977

Matrix: Water

Sample Dates: 12/17/2013-12/18/2013

Regulatory Standard*:

Maryland Department of the Environment (MDE) Voluntary Cleanup Program (VCP): Generic Numeric Cleanup Standards for Groundwater for Type I & II Aquifers, Tables 1 and 2 (March 2008).

Constituent	Unit	*Standard	Location: Date: Depth (ft):	MP-001 12/18/2013 0	MP-002 12/18/2013 0	MW-001 12/17/2013 0	MW-001R 12/17/2013 0	MW-002 12/17/2013 0	MW-003 12/17/2013 0
Tert-Amyl Ethyl Ether	ug/l	**		<2.9U	<1.5U	<0.29U	<1.5U	<0.29U	<1.5U
tert-Butylalcohol	ug/l	**		225	159	10.4	825	11.3	129
Tetrachloroethylene	ug/l	5		<3.5U	<1.8U	<0.35U	<1.8U	<0.35U	<1.8U
Toluene	ug/l	1000		725	764	4.6	2.3J	21.3	846
trans-1,2-Di-chloroethylene	ug/l	100		<2.6U	<1.3U	<0.26U	<1.3U	<0.26U	<1.3U
trans-1,3-Dichloropropene	ug/l	0.44		<2.9U#	<1.5U#	<0.29U	<1.5U#	<0.29U	<1.5U#
Trichloroethylene	ug/l	5		<3.3U	<1.7U	<0.33U	<1.7U	0.5J	<1.7U
Vinyl chloride	ug/l	2		<3U#	<1.5U	<0.3U	<1.5U	<0.3U	<1.5U
Xylene (total)	ug/l	10000		145	95.7	14.5	8.9J	20.1	3810

Constituent	Unit	*Standard	Location: Date: Depth (ft):	MW-003R 12/17/2013 0	MW-005 12/17/2013 0	MW-005R 12/17/2013 0	MW-006 12/17/2013 0	MW-007 12/17/2013 0	MW-008 12/17/2013 0
<i>Not Otherwise Specified</i>									
DBCP	ug/l	0.2		<1.5U#	<7.5U#	<150U#	<1.5U#	<7.5U#	<15U#
Dichlorofluoromethane	ug/l	**		<0.37U	<1.9U	<37U	<0.37U	<1.9U	<3.7U
Tert-Amyl Methyl Ether	ug/l	**		<0.2U	<1U	<20U	<0.2U	<1U	<2U
<i>Volatile Organic Compounds (VOCs)</i>									
1,1,1-trichloroethane	ug/l	200		<0.22U	<1.1U	<22U	<0.22U	<1.1U	<2.2U
1,1,2,2-Tetrachloroethane	ug/l	0.053		<0.34U#	<1.7U#	<34U#	<0.34U#	<1.7U#	<3.4U#

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Analytical Chemistry Report

Calvert Citgo 2815 Northeast Rd North East, Maryland

Project No.: 005977

Matrix: Water

Sample Dates: 12/17/2013-12/18/2013

Regulatory Standard*:

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Constituent	Unit	*Standard	Location:	MW-003R	MW-005	MW-005R	MW-006	MW-007	MW-008
			Date:	12/17/2013	12/17/2013	12/17/2013	12/17/2013	12/17/2013	12/17/2013
			Depth (ft):	0	0	0	0	0	0
1,1,2-Trichloroethane	ug/l	5		<0.33U	<1.7U	<33U#	<0.33U	<1.7U	<3.3U
1,1-Dichloroethane	ug/l	90		<0.28U	<1.4U	<28U	<0.28U	<1.4U	<2.8U
1,1-Dichloroethylene	ug/l	7		<0.29U	<1.5U	<29U#	<0.29U	<1.5U	<2.9U
1,2-Dibromoethane	ug/l	0.05		<0.28U#	<1.4U#	<28U#	<0.28U#	<1.4U#	<2.8U#
1,2-Dichloroethane	ug/l	5		<0.32U	<1.6U	<32U#	<0.32U	<1.6U	16.3
1,2-Dichloropropane	ug/l	5		<0.24U	<1.2U	<24U#	<0.24U	<1.2U	<2.4U
2-Hexanone	ug/l	**		<1.3U	<6.5U	<130U	<1.3U	<6.5U	<13U
Acetone	ug/l	550		<3.1U	399	653J	<3.1U	<15.5U	<31U
Benzene	ug/l	5		23.8	192	6140	3.2	431	359
Bromodichloromethane	ug/l	80		<0.27U	<1.4U	<27U	<0.27U	<1.4U	<2.7U
Bromoform	ug/l	80		<0.4U	<2U	<40U	<0.4U	<2U	<4U
Carbon disulfide	ug/l	100		0.39J	<1.2U	<23U	0.38J	<1.2U	<2.3U
Carbon tetrachloride	ug/l	5		<0.31U	<1.6U	<31U#	<0.31U	<1.6U	<3.1U
Chlorobenzene	ug/l	100		<0.19U	<0.95U	<19U	3.9	<0.95U	<1.9U
Chlorobromomethane	ug/l	**		<0.32U	<1.6U	<32U	<0.32U	<1.6U	<3.2U
Chloroethane	ug/l	3.6		<0.33U	<1.7U	<33U#	<0.33U	<1.7U	<3.3U
Chloroform	ug/l	80		<0.21U	<1.1U	<21U	<0.21U	<1.1U	<2.1U
cis-1,2-Dichloroethylene	ug/l	70		<0.32U	<1.6U	<32U	<0.32U	1.9J	<3.2U
cis-1,3-Dichloropropene	ug/l	0.44		<0.31U	<1.6U#	<31U#	<0.31U	<1.6U#	<3.1U#
Dibromochloromethane	ug/l	80		<0.45U	<2.3U	<45U	<0.45U	<2.3U	<4.5U
Dichlorodifluoromethane	ug/l	**		<0.33U	<1.7U	<33U	<0.33U	<1.7U	<3.3U

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Analytical Chemistry Report

Calvert Citgo 2815 Northeast Rd North East, Maryland

Project No.: 005977

Matrix: Water

Sample Dates: 12/17/2013-12/18/2013

Regulatory Standard*:

Maryland Department of the Environment (MDE) Voluntary Cleanup Program (VCP): Generic Numeric Cleanup Standards for Groundwater for Type I & II Aquifers, Tables 1 and 2 (March 2008).

Constituent	Unit	*Standard	Location:	MW-003R	MW-005	MW-005R	MW-006	MW-007	MW-008
			Date:	12/17/2013	12/17/2013	12/17/2013	12/17/2013	12/17/2013	12/17/2013
			Depth (ft):	0	0	0	0	0	0
Ethyl tert-butyl ether	ug/l	**		<0.19U	6	<19U	<0.19U	<0.95U	5.6J
Ethylbenzene	ug/l	700		28.5	1860	1240	10.5	177	63.3
Isopropyl Ether	ug/l	**		1.5	6.3	<25U	<0.25U	<1.3U	11.2
m/p-xylene	ug/l	**		117	6530	4460	45	350	24.9
Methyl bromide	ug/l	0.85		<0.39U	<2U#	<39U#	<0.39U	<2U#	<3.9U#
Methyl chloride	ug/l	19		<0.31U	65.5	<31U#	<0.31U	8.4	<3.1U
Methyl ethyl ketone	ug/l	700		<1.8U	33.2J	677J	<1.8U	<9U	<18U
Methyl isobutylketone (MIBK)	ug/l	630		2.2J	<7.5U	<150U	<1.5U	<7.5U	<15U
Methyl tert-butyl ether	ug/l	20		1.1	10.7	<33U#	0.58J	<1.7U	532
Methylene chloride	ug/l	5		<0.45U	<2.3U	<45U#	<0.45U	<2.3U	<4.5U
o-Xylene	ug/l	**		58.7	2990	1840	20.9	527	4J
Styrene	ug/l	100		0.24J	<1.2U	<24U	<0.24U	2.2J	<2.4U
Tert-Amyl alcohol	ug/l	**		<6.6U	675	<660U	<6.6U	37J	203
Tert-Amyl Ethyl Ether	ug/l	**		<0.29U	<1.5U	<29U	<0.29U	<1.5U	<2.9U
tert-Butylalcohol	ug/l	**		44.9	263	502J	<2.2U	<11U	459
Tetrachloroethylene	ug/l	5		<0.35U	<1.8U	<35U#	<0.35U	<1.8U	<3.5U
Toluene	ug/l	1000		67.8	<1.2U	20900	76.1	2780	16.9
trans-1,2-Di-chloroethylene	ug/l	100		<0.26U	<1.3U	<26U	<0.26U	<1.3U	<2.6U
trans-1,3-Dichloropropene	ug/l	0.44		<0.29U	<1.5U#	<29U#	<0.29U	<1.5U#	<2.9U#
Trichloroethylene	ug/l	5		<0.33U	<1.7U	<33U#	<0.33U	<1.7U	<3.3U
Vinyl chloride	ug/l	2		<0.3U	<1.5U	<30U#	<0.3U	<1.5U	<3U#

Print Date: 01/02/2014

Page 5

** No Applicable Regulatory Standard

Exceedences of the regulatory standard are printed in bold. # = Reporting limit exceeds regulatory standard. NOC = Not of Concern.

QUALIFIERS: U = Constituent not detected above Method Detection Limit (MDL). J = Estimated Value. < = Indicates that the reported concentration is the Method Detection Limit (MDL). D = Compound identified at a secondary dilution factor. B = Analyte reported in associated field or trip blank. N = Tentatively Identified Compound (TIC). Y = Tentatively Identified Compound (TIC) also identified in Method Blank. E = Reported result is over instrument calibration range. This result is an estimate; the true result may be higher. C = Calibration verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

Analytical Chemistry Report

Calvert Citgo 2815 Northeast Rd North East, Maryland

Project No.: 005977

Matrix: Water

Sample Dates: 12/17/2013-12/18/2013

Regulatory Standard*:

Maryland Department of the Environment (MDE) Voluntary Cleanup Program (VCP): Generic Numeric Cleanup Standards for Groundwater for Type I & II Aquifers, Tables 1 and 2 (March 2008).

Constituent	Unit	*Standard	Location:	MW-003R	MW-005	MW-005R	MW-006	MW-007	MW-008
			Date:	12/17/2013	12/17/2013	12/17/2013	12/17/2013	12/17/2013	12/17/2013
			Depth (ft):	0	0	0	0	0	0
Xylene (total)	ug/l	10000		176	9510	6300	66	877	28.9J

Constituent	Unit	*Standard	Location:	MW-008D
			Date:	12/18/2013
			Depth (ft):	0

Not Otherwise Specified

DBCP	ug/l	0.2	<1.5U#
Dichlorofluoromethane	ug/l	**	<0.37U
Tert-Amyl Methyl Ether	ug/l	**	<0.2U

Volatile Organic Compounds (VOCs)

1,1,1-trichloroethane	ug/l	200	<0.22U
1,1,2,2-Tetrachloroethane	ug/l	0.053	<0.34U#
1,1,2-Trichloroethane	ug/l	5	<0.33U
1,1-Dichloroethane	ug/l	90	<0.28U
1,1-Dichloroethylene	ug/l	7	<0.29U
1,2-Dibromoethane	ug/l	0.05	<0.28U#
1,2-Dichloroethane	ug/l	5	<0.32U
1,2-Dichloropropane	ug/l	5	<0.24U
2-Hexanone	ug/l	**	<1.3U
Acetone	ug/l	550	<3.1U

Print Date: 01/02/2014

Page 6

** No Applicable Regulatory Standard

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Analytical Chemistry Report

Calvert Citgo 2815 Northeast Rd North East, Maryland

Project No.: 005977

Matrix: Water

Sample Dates: 12/17/2013-12/18/2013

Regulatory Standard*:

Maryland Department of the Environment (MDE) Voluntary Cleanup Program (VCP): Generic Numeric Cleanup Standards for Groundwater for Type I & II Aquifers, Tables 1 and 2 (March 2008).

Constituent	Unit	*Standard	Location: Date: Depth (ft):	MW-008D 12/18/2013 0
Benzene	ug/l	5		0.97J
Bromodichloromethane	ug/l	80		<0.27U
Bromoform	ug/l	80		<0.4U
Carbon disulfide	ug/l	100		<0.23U
Carbon tetrachloride	ug/l	5		<0.31U
Chlorobenzene	ug/l	100		<0.19U
Chlorobromomethane	ug/l	**		<0.32U
Chloroethane	ug/l	3.6		<0.33U
Chloroform	ug/l	80		<0.21U
cis-1,2-Dichloroethylene	ug/l	70		<0.32U
cis-1,3-Dichloropropene	ug/l	0.44		<0.31U
Dibromochloromethane	ug/l	80		<0.45U
Dichlorodifluoromethane	ug/l	**		<0.33U
Ethyl tert-butyl ether	ug/l	**		<0.19U
Ethylbenzene	ug/l	700		<0.34U
Isopropyl Ether	ug/l	**		<0.25U
m/p-xylene	ug/l	**		2J
Methyl bromide	ug/l	0.85		<0.39U
Methyl chloride	ug/l	19		<0.31U
Methyl ethyl ketone	ug/l	700		<1.8U
Methyl isobutylketone (MIBK)	ug/l	630		<1.5U

Print Date: 01/02/2014

Page 7

** No Applicable Regulatory Standard

Exceedences of the regulatory standard are printed in bold. # = Reporting limit exceeds regulatory standard. NOC = Not of Concern.

QUALIFIERS: U = Constituent not detected above Method Detection Limit (MDL). J = Estimated Value. < = Indicates that the reported concentration is the Method Detection Limit (MDL). D = Compound identified at a secondary dilution factor. B = Analyte reported in associated field or trip blank. N = Tentatively Identified Compound (TIC). Y = Tentatively Identified Compound (TIC) also identified in Method Blank. E = Reported result is over instrument calibration range. This result is an estimate; the true result may be higher. C = Calibration verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

Analytical Chemistry Report

Calvert Citgo 2815 Northeast Rd North East, Maryland

Project No.: 005977

Matrix: Water

Sample Dates: 12/17/2013-12/18/2013

Regulatory Standard*:

Maryland Department of the Environment (MDE) Voluntary Cleanup Program (VCP): Generic Numeric Cleanup Standards for Groundwater for Type I & II Aquifers, Tables 1 and 2 (March 2008).

Constituent	Unit	*Standard	Location: Date: Depth (ft):	MW-008D 12/18/2013 0
Methyl tert-butyl ether	ug/l	20		<0.33U
Methylene chloride	ug/l	5		<0.45U
o-Xylene	ug/l	**		<0.33U
Styrene	ug/l	100		<0.24U
Tert-Amyl alcohol	ug/l	**		<6.6U
Tert-Amyl Ethyl Ether	ug/l	**		<0.29U
tert-Butylalcohol	ug/l	**		<2.2U
Tetrachloroethylene	ug/l	5		<0.35U
Toluene	ug/l	1000		1.4
trans-1,2-Di-chloroethylene	ug/l	100		<0.26U
trans-1,3-Dichloropropene	ug/l	0.44		<0.29U
Trichloroethylene	ug/l	5		<0.33U
Vinyl chloride	ug/l	2		<0.3U
Xylene (total)	ug/l	10000		2J

** No Applicable Regulatory Standard

Exceedences of the regulatory standard are printed in bold. # = Reporting limit exceeds regulatory standard. NOC = Not of Concern.

QUALIFIERS: U = Constituent not detected above Method Detection Limit (MDL). J = Estimated Value. < = Indicates that the reported concentration is the Method Detection Limit (MDL). D = Compound identified at a secondary dilution factor. B = Analyte reported in associated field or trip blank. N = Tentatively Identified Compound (TIC). Y = Tentatively Identified Compound (TIC) also identified in Method Blank. E = Reported result is over instrument calibration range. This result is an estimate; the true result may be higher. C = Calibration verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

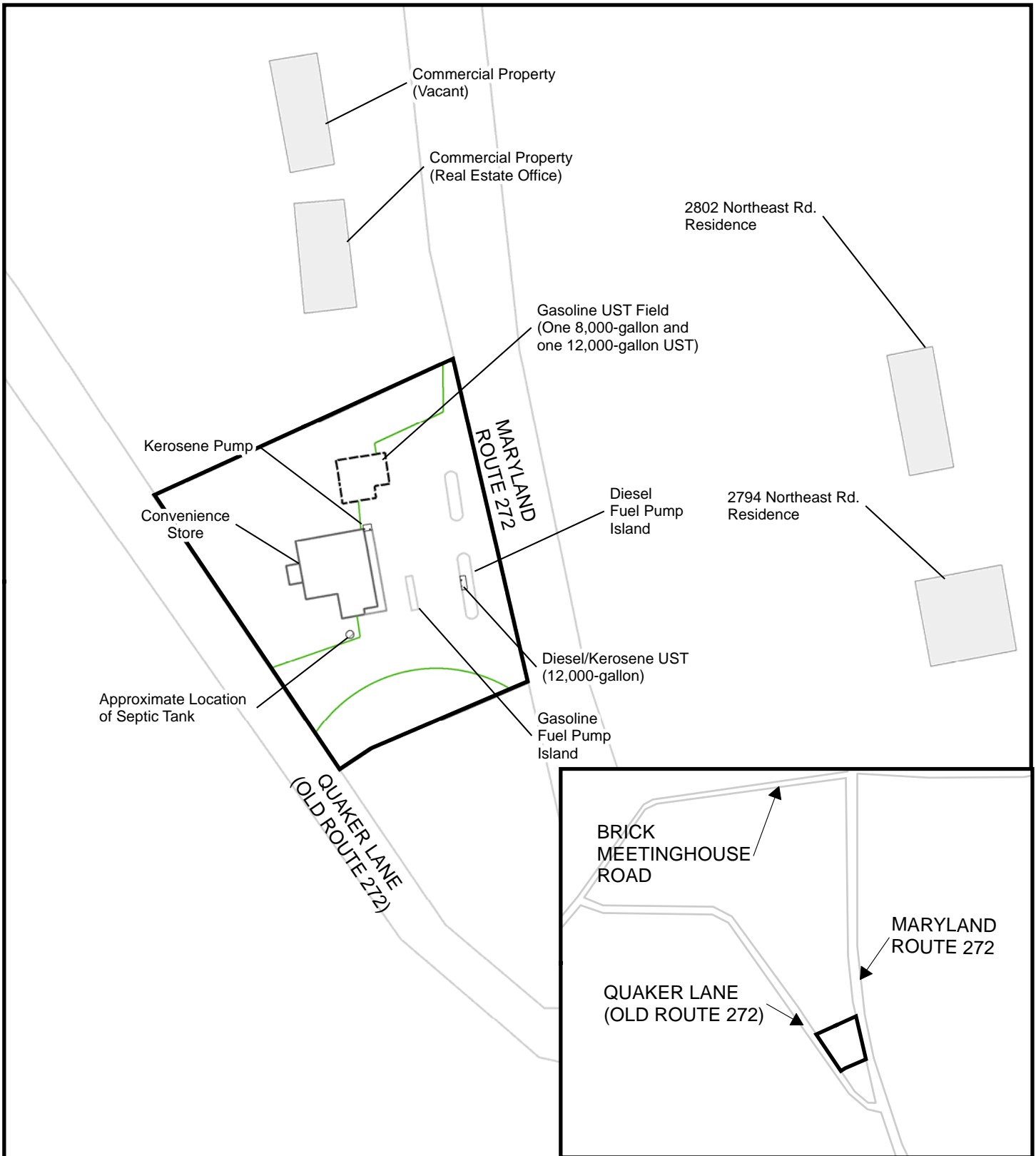


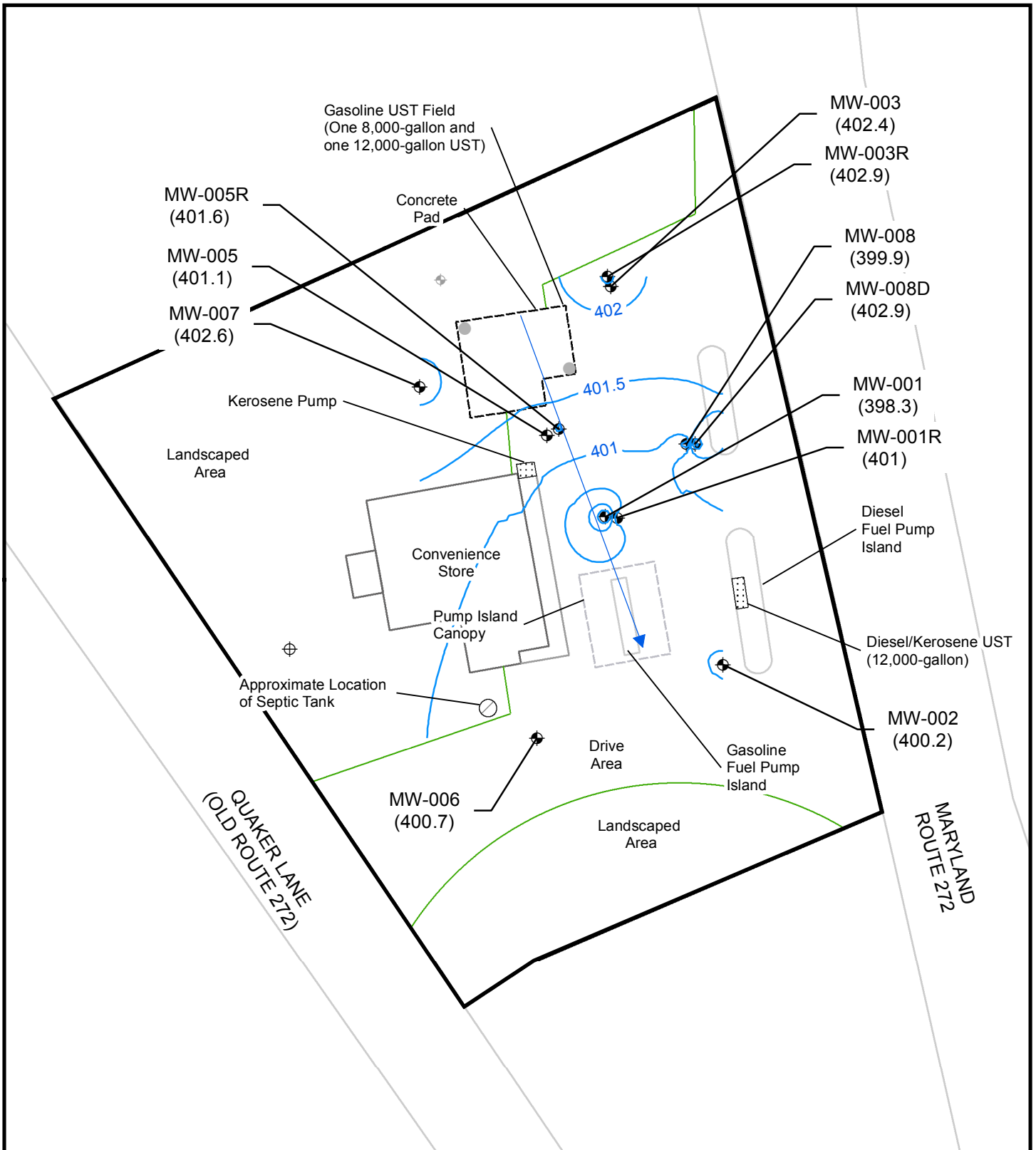
Figure 2: Site Diagram

 Site Boundary

REPSG
 React Environmental
 Professional Services Group, Inc.
 MAP SCALE: 1 inch = 100 feet
 0 20 40 80 120 160 Feet

PROJECT NAME: CALVERT CITGO
PROJECT ADDRESS: 2815 NORTH EAST ROAD, NORTH EAST, MD
PROJECT NUMBER: 005977
DATE: DECEMBER 2010





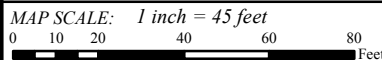
GROUNDWATER CONTOUR MAP (December 17-18, 2013)

—▶ Groundwater Directional Flow

- | | | | | | |
|----------|--|---|----------------------------|---|---------------------|
| MW-001 | Site ID | ⊕ | Monitoring Well (Measured) | ● | Leak Detection Well |
| (176.01) | Groundwater Elevation (feet above datum) | ⊕ | Monitoring Well (Lost) | ⊕ | Potable Well |



PROJECT NAME: CALVERT CITGO
PROJECT ADDRESS: 2815 NORTH EAST ROAD, NORTH EAST, MD
PROJECT NUMBER: 005977
DATE: JANUARY 2014



MP-002
Benzene [5]: **220** [4Q 2013]
Methyl tert-butyl ether [20]: **32.6** [4Q 2013]
Toluene [1000]: 764 [4Q 2013]

MP-001
Benzene [5]: **423** [4Q 2013]
Methyl chloride [19]: **63** [4Q 2013]
Methyl tert-butyl ether [20]: **83.2** [4Q 2013]
Toluene [1000]: 725 [4Q 2013]

MW-007
Benzene [5]: **431** [4Q 2013]
Ethylbenzene [700]: 177 [4Q 2013]
Methyl chloride [19]: 8.4 [4Q 2013]
Toluene [1000]: **2780** [4Q 2013]

MW-005R
Acetone [550]: **653J** [4Q 2013]
Benzene [5]: **6140** [4Q 2013]
Ethylbenzene [700]: **1240** [4Q 2013]
Toluene [1000]: **20900** [4Q 2013]

MW-005
Acetone [550]: 399 [4Q 2013]
Benzene [5]: **192** [4Q 2013]
Ethylbenzene [700]: **1860** [4Q 2013]
Methyl chloride [19]: **65.5** [4Q 2013]
Methyl tert-butyl ether [20]: 10.7 [4Q 2013]

MW-001
1,2-Dichloroethane [5]: 1.1 [4Q 2013]
Benzene [5]: **132** [4Q 2013]
Ethylbenzene [700]: 4.8 [4Q 2013]
Toluene [1000]: 4.6 [4Q 2013]

MW-001R
1,2-Dichloroethane [5]: **118** [4Q 2013]
Benzene [5]: **21.7** [4Q 2013]
Methyl tert-butyl ether [20]: **80.4** [4Q 2013]
Toluene [1000]: 2.3J [4Q 2013]

MW-006
Benzene [5]: 3.2 [4Q 2013]
Ethylbenzene [700]: 10.5 [4Q 2013]
Methyl tert-butyl ether [20]: 0.58J [4Q 2013]
Toluene [1000]: 76.1 [4Q 2013]

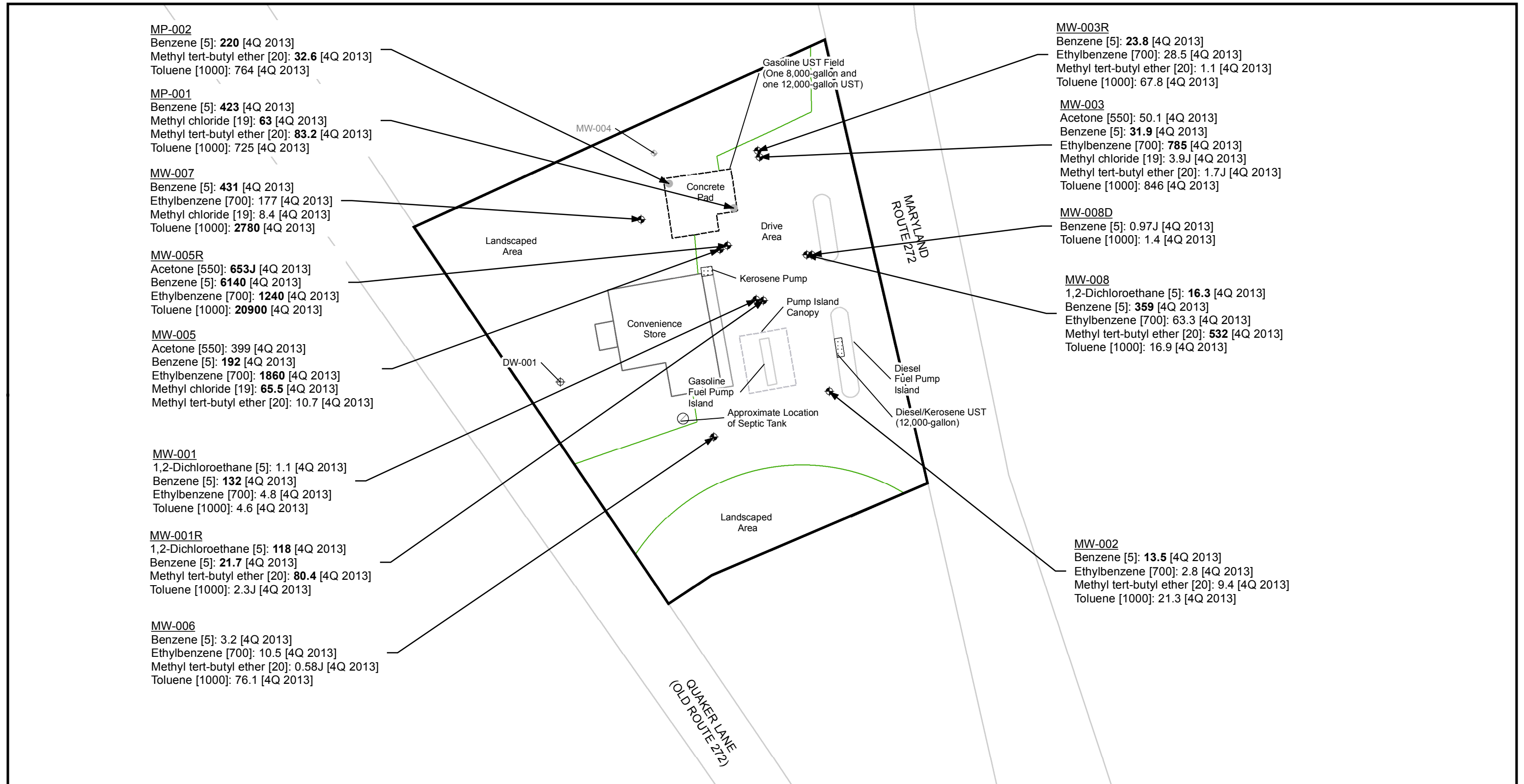
MW-003R
Benzene [5]: **23.8** [4Q 2013]
Ethylbenzene [700]: 28.5 [4Q 2013]
Methyl tert-butyl ether [20]: 1.1 [4Q 2013]
Toluene [1000]: 67.8 [4Q 2013]

MW-003
Acetone [550]: 50.1 [4Q 2013]
Benzene [5]: **31.9** [4Q 2013]
Ethylbenzene [700]: **785** [4Q 2013]
Methyl chloride [19]: 3.9J [4Q 2013]
Methyl tert-butyl ether [20]: 1.7J [4Q 2013]
Toluene [1000]: 846 [4Q 2013]

MW-008D
Benzene [5]: 0.97J [4Q 2013]
Toluene [1000]: 1.4 [4Q 2013]

MW-008
1,2-Dichloroethane [5]: **16.3** [4Q 2013]
Benzene [5]: **359** [4Q 2013]
Ethylbenzene [700]: 63.3 [4Q 2013]
Methyl tert-butyl ether [20]: **532** [4Q 2013]
Toluene [1000]: 16.9 [4Q 2013]

MW-002
Benzene [5]: **13.5** [4Q 2013]
Ethylbenzene [700]: 2.8 [4Q 2013]
Methyl tert-butyl ether [20]: 9.4 [4Q 2013]
Toluene [1000]: 21.3 [4Q 2013]

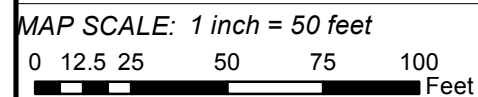


GROUNDWATER CONTAMINANT DISTRIBUTION MAP (December 17-18, 2013)

● Leak Detection Wells ♦ Lost/Abandoned Monitoring Well ◆ Monitoring Well ⊕ Potable Well □ Site Boundary



PROJECT NAME: CALVERT CITGO
PROJECT ADDRESS: 2815 NORTH EAST ROAD, NORTH EAST, MD
PROJECT NUMBER: 005977
DATE: JANUARY 2014



LABEL LEGEND:

Concentration (ppb) Sample Date

B-017
Toluene (100): **270** [2Q 2004] / ND [3Q 2004]

Groundwater Cleanup Standard (ppb)

ND - Concentration Not Detected Above Laboratory Reporting Limits Exceedences of the Regulatory Standard Printed in bold





**Analytical
Laboratory Services, Inc.**
Environmental • Industrial Hygiene • Field Services

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**

**ALL SHADED AREAS MUST BE COMPLETED BY THE
CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.**

Courier: _____

Tracking #: _____

COC# _____

Co. Name: **REPSO, Inc.**

Contact (Report to): **jmanuel@reps.com**

Address: **6901 Kingessing Ave
Phila, PA 19142**

Phone: **25-789-3300**

Bill to (if different than Report to): **Same**

PO#: **8834**

Project Name#: **Chart City 15977**

ALSI Quote #:

TAT: Normal-Standard TAT is 10-12 business days. **5 day** Date Required:

Rush-Subject to ALSI approval and surcharges. Approved By:

Email? **jmanuel@reps.com / bmacphail@reps.com**

Fax? No. **215-781-1587**

Sample Description/Location (as it will appear on the lab report)

Sample Description/Location	COC Comments	Sample Date	Military Time	G or C	Matrix
1 MW-001		12/17/13	1330	6 GW	3
2 MW-001R		12/17/13	1440	6 GW	3
3 MW-002		12/17/13	1845	6 GW	3
4 MW-003		12/17/13	1840	6 GW	3
5 MW-003R		12/17/13	1830	6 GW	3
6 MW-005		12/17/13	1845	6 GW	3
7 MW-005R		12/17/13	1835	6 GW	3
8 MW-006		12/17/13	1440	6 GW	3

SAMPLED BY (Please Print): **GARTH MANOSKY**

LOGGED BY (signature): _____

REVIEWED BY (signature): _____

Relinquished By / Company Name

Date

Time

Received By / Company Name

Date

Time

Container Type	Container Size	Preservative	ANALYSES/METHOD REQUESTED
VOL	40ml	HCL	

Enter Number of Containers Per Analysis
NOCS By 82603 Including Fuel Apprnts

Standard	CLP-like	NL-Reduced	NL-Fill	SIWV Former?	State Sampler Collected in?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Standard	CLP-like	NL-Reduced	NL-Fill	SIWV Former?	State Sampler Collected in?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Standard	CLP-like	NL-Reduced	NL-Fill	SIWV Former?	State Sampler Collected in?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Standard	CLP-like	NL-Reduced	NL-Fill	SIWV Former?	State Sampler Collected in?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Receipt Information (Completed by Sampler/Receiver)
Performed by: _____ INITIAL HERE
Cooler Temp: _____
Therm. ID: _____
No. of Coolers: _____
Notes: _____

Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?
Y N	Y N	Y N	Y N

Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
Y N	Y N	Y N	Y N	Y N

ALSI FIELD SERVICES
Pickup <input type="checkbox"/>
Labor <input type="checkbox"/>
Composite Sampling <input type="checkbox"/>
Rental Equipment <input type="checkbox"/>
Other: _____

* G-Grub; C-Composite **Matrix: A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass; PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.



Analytical Laboratory Services, Inc.
 Environmental • Industrial Hygiene • Field Services

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

**CHAIN OF CUSTODY/
 REQUEST FOR ANALYSIS**

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page **1** of **3**
 Courier: **[Signature]**
 Tracking #: _____

COC#

Co. Name: **KEPSCO, Inc**
 Contact (Report to): **Samus Manuel**
 Address: **6901 Knysessing Ave
 Pmly, PA 19142**
 Phone: **215-724-2320**

Project Name#: **Collect/Type/Seq 77** ALSI Quote #:
 TAT: Normal-Standard TAT is 10-12 business days. Date Required:
 Rush-Subject to ALSI approval and surcharges. Approved By:

Bill to (if different than Report to): **Same** PO#: **8834**
 Email? **immanuel.kepco.com / bruce.phillips@kepco.com**

Sample Description/Location <small>(as it will appear on the lab report)</small>	COC Comments	Sample Date	Military Time	G or C	Matrix
1 MW-001		12/13	1400	6 GW	3
2 MW-008		12/13	1230	6 GW	3
3 MW-008D		12/13	1430	6 GW	3
4 MP-001		12/13	1230	6 GW	3
5 MP-002		12/13	1500	6 GW	3
6 Dyp-001		12/13	---	6 GW	3
7 Field Blank-001		12/13	1212	6 DTC	3
8 Field Blank-002		12/13	1234	6 DTC	3

Container Type	Container Size	Preservative	ANALYSES/METHOD REQUESTED
NOT	100ml	HCL	

Enter Number of Containers Per Analysis
3
3
3
3
3
3
3
3

LOGGED BY (signature):	REVIEWED BY (signature):	DATE:	TIME:
<i>[Signature]</i>	<i>[Signature]</i>		

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
Saman Mahosky					

Receipt Information (Completed by Sample Receiver)
 Performed by: _____ INITIAL HERE

Cooler Temp: _____
 Therm. ID: _____
 No. of Coolers: _____

Notes:

Correct containers?	Y	N	Correct sample volume?	Y	N	Correct preservation?	Y	N	Headspace/Volatiles?	Y	N
Custody seals Present?	Y	N	(if present) Seals intact?	Y	N	Received on ice?	Y	N	COC/Labels complete/accurate?	Y	N
Container in good condition?	Y	N	Circle appropriate Y or N.								

ALSI FIELD SERVICES
 Pickup
 Labor
 Composite Sampling
 Rental Equipment
 Other: _____

* G=Grab, C=Composite
 **Matrix: A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
 ***Container Type: AG-Amber Glass; CG-Clear Glass; PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.



**Analytical
Laboratory Services, Inc.**
Environmental • Industrial Hygiene • Field Services

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**

**ALL SHADED AREAS MUST BE COMPLETED BY THE
CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.**

Courier: _____

Tracking #: _____

COC# _____

Co. Name: **PERSSO, Inc.**
Contact (Report to): **James Manuel**
Address: **Edgell Krossing Ave Philadelphia, PA 19114**
Phone: **215-789-3200**

Bill to (if different than Report to): **Same** PO#: **8834**

Project Name#: **Calvert City/15977** ALSI Quote #:

TAT: Normal-Standard TAT is 10-12 business days. Date Required:
 Rush-Subject to ALSI approval and surcharges. Approved By:

Email? **James.Manuel@persso.com; jmanuel@persso.com**

Fax? No. Yes

Sample Description/Location: **TRP Blank-001** COC Comments: **PA175 - 6 DIL'S**

Sample Date: _____ Military Time: _____

LOGGED BY (signature): _____ DATE: _____ TIME: _____

REVIEWED BY (signature): _____ DATE: _____ TIME: _____

Relinquished By / Company Name: **GARTH MAHOSKY** Date: _____ Time: _____

Received By / Company Name: _____ Date: _____ Time: _____

1 _____ Date: _____ Time: _____

2 _____ Date: _____ Time: _____

3 _____ Date: _____ Time: _____

4 _____ Date: _____ Time: _____

5 _____ Date: _____ Time: _____

6 _____ Date: _____ Time: _____

7 _____ Date: _____ Time: _____

8 _____ Date: _____ Time: _____

9 _____ Date: _____ Time: _____

**Container Type	NOA
**Container Size	40ml
**Preservative	HCL

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

VOCS By 8260 B Including Fuel Oxygenates

G or C

Matrix

Standard	<input type="checkbox"/>	SDWA	<input type="checkbox"/>	State Samples	<input checked="" type="checkbox"/>
CLP-like	<input type="checkbox"/>	Formaldehyde	<input type="checkbox"/>	MD	<input type="checkbox"/>
NI-Reduced	<input type="checkbox"/>	yes	<input type="checkbox"/>	NJ	<input type="checkbox"/>
NI-Fill	<input type="checkbox"/>	yes	<input type="checkbox"/>	NV	<input type="checkbox"/>
	<input type="checkbox"/>	Other	<input type="checkbox"/>	PA	<input type="checkbox"/>

EDDs Required? (If yes, format type: **EQMTS**)
DOD Criteria Required?

Enter PWSID No: _____

Correct containers?	Y	N	Correct sample volume?	Y	N	Correct preservation?	Y	N	Headspace/Volatiles?	Y	N
Custody seals Present?	Y	N	(if present) Seals intact?	Y	N	Received on ice?	Y	N	COC/Labels complete/accurate?	Y	N
Container in good condition?						Y	N	Circle appropriate Y or N.			

ALSI FIELD SERVICES

Pickup

Labor

Composite Sampling

Rental Equipment

Other: _____

December 30, 2013

Mr. James Manuel
REPSG
6901 Kingsessing Avenue
Philadelphia, PA 19142

Certificate of Analysis

Project Name:	2013-CALVERT CITGO	Workorder:	1064416
Purchase Order:	8834	Workorder ID:	2013-CALVERT CITGO PROJECT/597

Dear Mr. Manuel,

Enclosed are the analytical results for samples received by the laboratory on Thursday, December 19, 2013.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.


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ALS York: 978 Loucks Mill Road, York, PA 17402 717-505-5280

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Brenda MacPhail Kellogg

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.


Susan Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Discard Date: 01/13/2014

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
1064416001	MW-001_20131217_N	Ground Water	12/17/13 13:30	12/19/13 22:40	Customer
1064416002	MW-001R_20131217_N	Ground Water	12/17/13 12:40	12/19/13 22:40	Customer
1064416003	MW-002_20131217_N	Ground Water	12/17/13 13:15	12/19/13 22:40	Customer
1064416004	MW-003_20131217_N	Ground Water	12/17/13 11:20	12/19/13 22:40	Customer
1064416005	MW-003R_20131217_N	Ground Water	12/17/13 10:30	12/19/13 22:40	Customer
1064416006	MW-005_20131217_N	Ground Water	12/17/13 11:25	12/19/13 22:40	Customer
1064416007	MW-005R_20131217_N	Ground Water	12/17/13 10:25	12/19/13 22:40	Customer
1064416008	MW-006_20131217_N	Ground Water	12/17/13 14:20	12/19/13 22:40	Customer
1064416009	MW-007_20131217_N	Ground Water	12/17/13 14:00	12/19/13 22:40	Customer
1064416010	MW-008_20131217_N	Ground Water	12/17/13 12:20	12/19/13 22:40	Customer
1064416011	MW-008D_20131217_N	Ground Water	12/18/13 14:20	12/19/13 22:40	Customer
1064416012	MP-001_20131217_N	Ground Water	12/18/13 12:20	12/19/13 22:40	Customer
1064416013	MP-002_20131217_N	Ground Water	12/18/13 11:50	12/19/13 22:40	Customer
1064416014	DUP-001_20131217_D	Ground Water	12/17/13 00:00	12/19/13 22:40	Customer
1064416015	Field Blank-001_20131217_FB	Ground Water	12/17/13 12:12	12/19/13 22:40	Customer
1064416016	Field Blank-002_20131218_FB	Ground Water	12/18/13 12:24	12/19/13 22:40	Customer
1064416017	Trip Blank_20131217_TB	Ground Water	12/17/13 00:00	12/19/13 22:40	Customer

Workorder Comments:

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SAMPLE SUMMARY

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Discard Date: 01/13/2014

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
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Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: 1064416001 **Date Collected:** 12/17/2013 13:30 **Matrix:** Ground Water
Sample ID: MW-001_20131217_N **Date Received:** 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		10.0	3.1	SW846 8260B			12/27/13 06:00	DD	A
tert-Amyl methyl ether	ND	ug/L		1.0	0.20	SW846 8260B			12/27/13 06:00	DD	A
tert-Amyl Alcohol	53.1	ug/L	1	10.0	6.6	SW846 8260B			12/27/13 06:00	DD	A
tert-Amyl Ethylether	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:00	DD	A
Benzene	132	ug/L		1.0	0.23	SW846 8260B			12/27/13 06:00	DD	A
Bromochloromethane	ND	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:00	DD	A
Bromodichloromethane	ND	ug/L		1.0	0.27	SW846 8260B			12/27/13 06:00	DD	A
Bromoform	ND	ug/L	2	1.0	0.40	SW846 8260B			12/27/13 06:00	DD	A
Bromomethane	ND	ug/L		1.0	0.39	SW846 8260B			12/27/13 06:00	DD	A
2-Butanone	ND	ug/L		10.0	1.8	SW846 8260B			12/27/13 06:00	DD	A
tert-Butyl Alcohol	10.4	ug/L		10.0	2.2	SW846 8260B			12/27/13 06:00	DD	A
Carbon Disulfide	0.30J	ug/L		1.0	0.23	SW846 8260B			12/27/13 06:00	DD	A
Carbon Tetrachloride	ND	ug/L		1.0	0.31	SW846 8260B			12/27/13 06:00	DD	A
Chlorobenzene	ND	ug/L		1.0	0.19	SW846 8260B			12/27/13 06:00	DD	A
Chlorodibromomethane	ND	ug/L	3	1.0	0.45	SW846 8260B			12/27/13 06:00	DD	A
Chloroethane	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:00	DD	A
Chloroform	ND	ug/L		1.0	0.21	SW846 8260B			12/27/13 06:00	DD	A
Chloromethane	ND	ug/L		1.0	0.31	SW846 8260B			12/27/13 06:00	DD	A
1,2-Dibromo-3-chloropropane	ND	ug/L		7.0	1.5	SW846 8260B			12/27/13 06:00	DD	A
1,2-Dibromoethane	ND	ug/L		1.0	0.28	SW846 8260B			12/27/13 06:00	DD	A
Dichlorodifluoromethane	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:00	DD	A
1,1-Dichloroethane	ND	ug/L		1.0	0.28	SW846 8260B			12/27/13 06:00	DD	A
1,2-Dichloroethane	1.1	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:00	DD	A
1,1-Dichloroethene	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:00	DD	A
cis-1,2-Dichloroethene	ND	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:00	DD	A
trans-1,2-Dichloroethene	ND	ug/L		1.0	0.26	SW846 8260B			12/27/13 06:00	DD	A
Dichlorofluoromethane	ND	ug/L		1.0	0.37	SW846 8260B			12/27/13 06:00	DD	A
1,2-Dichloropropane	ND	ug/L		1.0	0.24	SW846 8260B			12/27/13 06:00	DD	A
cis-1,3-Dichloropropene	ND	ug/L	4	1.0	0.31	SW846 8260B			12/27/13 06:00	DD	A
trans-1,3-Dichloropropene	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:00	DD	A
Diisopropyl ether	0.49J	ug/L		1.0	0.25	SW846 8260B			12/27/13 06:00	DD	A
Ethyl tert-butyl ether	ND	ug/L		1.0	0.19	SW846 8260B			12/27/13 06:00	DD	A
Ethylbenzene	4.8	ug/L		1.0	0.34	SW846 8260B			12/27/13 06:00	DD	A
2-Hexanone	ND	ug/L		5.0	1.3	SW846 8260B			12/27/13 06:00	DD	A
Methyl t-Butyl Ether	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:00	DD	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		5.0	1.5	SW846 8260B			12/27/13 06:00	DD	A
Methylene Chloride	ND	ug/L		1.0	0.45	SW846 8260B			12/27/13 06:00	DD	A
Styrene	ND	ug/L		1.0	0.24	SW846 8260B			12/27/13 06:00	DD	A
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0	0.34	SW846 8260B			12/27/13 06:00	DD	A
Tetrachloroethene	ND	ug/L		1.0	0.35	SW846 8260B			12/27/13 06:00	DD	A

ALS Environmental Laboratory Locations Across North America

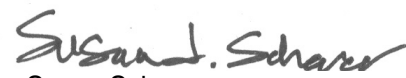
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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416001** Date Collected: 12/17/2013 13:30 Matrix: Ground Water
Sample ID: **MW-001_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene	4.6	ug/L		1.0	0.23	SW846 8260B			12/27/13 06:00	DD	A
Total Xylenes	14.5	ug/L		3.0	0.66	SW846 8260B			12/27/13 06:00	DD	A
1,1,1-Trichloroethane	ND	ug/L		1.0	0.22	SW846 8260B			12/27/13 06:00	DD	A
1,1,2-Trichloroethane	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:00	DD	A
Trichloroethene	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:00	DD	A
Vinyl Chloride	ND	ug/L		1.0	0.30	SW846 8260B			12/27/13 06:00	DD	A
o-Xylene	2.1	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:00	DD	A
mp-Xylene	12.4	ug/L		2.0	0.52	SW846 8260B			12/27/13 06:00	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	110	%		62-133		SW846 8260B			12/27/13 06:00	DD	A
4-Bromofluorobenzene (S)	111	%		79-114		SW846 8260B			12/27/13 06:00	DD	A
Dibromofluoromethane (S)	92.7	%		78-116		SW846 8260B			12/27/13 06:00	DD	A
Toluene-d8 (S)	97.8	%		76-127		SW846 8260B			12/27/13 06:00	DD	A

Sample Comments:


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: 1064416002	Date Collected: 12/17/2013 12:40	Matrix: Ground Water
Sample ID: MW-001R_20131217_N	Date Received: 12/19/2013 22:40	

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		50.0	15.5	SW846 8260B			12/27/13 13:08	TMP	B
tert-Amyl methyl ether	ND	ug/L	5	5.0	1.0	SW846 8260B			12/27/13 13:08	TMP	B
tert-Amyl Alcohol	1130	ug/L	6	50.0	33.0	SW846 8260B			12/27/13 13:08	TMP	B
tert-Amyl Ethylether	ND	ug/L	7	5.0	1.5	SW846 8260B			12/27/13 13:08	TMP	B
Benzene	21.7	ug/L		5.0	1.2	SW846 8260B			12/27/13 13:08	TMP	B
Bromochloromethane	ND	ug/L		5.0	1.6	SW846 8260B			12/27/13 13:08	TMP	B
Bromodichloromethane	ND	ug/L	8	5.0	1.4	SW846 8260B			12/27/13 13:08	TMP	B
Bromoform	ND	ug/L	9	5.0	2.0	SW846 8260B			12/27/13 13:08	TMP	B
Bromomethane	ND	ug/L		5.0	2.0	SW846 8260B			12/27/13 13:08	TMP	B
2-Butanone	ND	ug/L		50.0	9.0	SW846 8260B			12/27/13 13:08	TMP	B
tert-Butyl Alcohol	825	ug/L		50.0	11.0	SW846 8260B			12/27/13 13:08	TMP	B
Carbon Disulfide	ND	ug/L		5.0	1.2	SW846 8260B			12/27/13 13:08	TMP	B
Carbon Tetrachloride	ND	ug/L		5.0	1.6	SW846 8260B			12/27/13 13:08	TMP	B
Chlorobenzene	ND	ug/L		5.0	0.95	SW846 8260B			12/27/13 13:08	TMP	B
Chlorodibromomethane	ND	ug/L	10	5.0	2.3	SW846 8260B			12/27/13 13:08	TMP	B
Chloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/27/13 13:08	TMP	B
Chloroform	ND	ug/L		5.0	1.1	SW846 8260B			12/27/13 13:08	TMP	B
Chloromethane	ND	ug/L		5.0	1.6	SW846 8260B			12/27/13 13:08	TMP	B
1,2-Dibromo-3-chloropropane	ND	ug/L		35.0	7.5	SW846 8260B			12/27/13 13:08	TMP	B
1,2-Dibromoethane	ND	ug/L		5.0	1.4	SW846 8260B			12/27/13 13:08	TMP	B
Dichlorodifluoromethane	ND	ug/L		5.0	1.7	SW846 8260B			12/27/13 13:08	TMP	B
1,1-Dichloroethane	ND	ug/L		5.0	1.4	SW846 8260B			12/27/13 13:08	TMP	B
1,2-Dichloroethane	118	ug/L		5.0	1.6	SW846 8260B			12/27/13 13:08	TMP	B
1,1-Dichloroethene	ND	ug/L		5.0	1.5	SW846 8260B			12/27/13 13:08	TMP	B
cis-1,2-Dichloroethene	ND	ug/L		5.0	1.6	SW846 8260B			12/27/13 13:08	TMP	B
trans-1,2-Dichloroethene	ND	ug/L		5.0	1.3	SW846 8260B			12/27/13 13:08	TMP	B
Dichlorofluoromethane	ND	ug/L		5.0	1.9	SW846 8260B			12/27/13 13:08	TMP	B
1,2-Dichloropropane	ND	ug/L		5.0	1.2	SW846 8260B			12/27/13 13:08	TMP	B
cis-1,3-Dichloropropene	ND	ug/L	11	5.0	1.6	SW846 8260B			12/27/13 13:08	TMP	B
trans-1,3-Dichloropropene	ND	ug/L	12	5.0	1.5	SW846 8260B			12/27/13 13:08	TMP	B
Diisopropyl ether	26.4	ug/L		5.0	1.3	SW846 8260B			12/27/13 13:08	TMP	B
Ethyl tert-butyl ether	ND	ug/L		5.0	0.95	SW846 8260B			12/27/13 13:08	TMP	B
Ethylbenzene	ND	ug/L		5.0	1.7	SW846 8260B			12/27/13 13:08	TMP	B
2-Hexanone	ND	ug/L		25.0	6.5	SW846 8260B			12/27/13 13:08	TMP	B
Methyl t-Butyl Ether	80.4	ug/L		5.0	1.7	SW846 8260B			12/27/13 13:08	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		25.0	7.5	SW846 8260B			12/27/13 13:08	TMP	B
Methylene Chloride	ND	ug/L		5.0	2.3	SW846 8260B			12/27/13 13:08	TMP	B
Styrene	ND	ug/L		5.0	1.2	SW846 8260B			12/27/13 13:08	TMP	B
1,1,2,2-Tetrachloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/27/13 13:08	TMP	B
Tetrachloroethene	ND	ug/L		5.0	1.8	SW846 8260B			12/27/13 13:08	TMP	B

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ANALYTICAL RESULTS

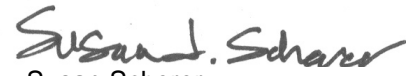
Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: 1064416002 **Date Collected:** 12/17/2013 12:40 **Matrix:** Ground Water
Sample ID: MW-001R_20131217_N **Date Received:** 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene	2.3J	ug/L		5.0	1.2	SW846 8260B			12/27/13 13:08	TMP	B
Total Xylenes	8.9J	ug/L		15.0	3.3	SW846 8260B			12/27/13 13:08	TMP	B
1,1,1-Trichloroethane	ND	ug/L		5.0	1.1	SW846 8260B			12/27/13 13:08	TMP	B
1,1,2-Trichloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/27/13 13:08	TMP	B
Trichloroethene	ND	ug/L		5.0	1.7	SW846 8260B			12/27/13 13:08	TMP	B
Vinyl Chloride	ND	ug/L		5.0	1.5	SW846 8260B			12/27/13 13:08	TMP	B
o-Xylene	ND	ug/L		5.0	1.7	SW846 8260B			12/27/13 13:08	TMP	B
mp-Xylene	8.9J	ug/L		10.0	2.6	SW846 8260B			12/27/13 13:08	TMP	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	96.5	%		62-133		SW846 8260B			12/27/13 13:08	TMP	B
4-Bromofluorobenzene (S)	97.2	%		79-114		SW846 8260B			12/27/13 13:08	TMP	B
Dibromofluoromethane (S)	81.1	%		78-116		SW846 8260B			12/27/13 13:08	TMP	B
Toluene-d8 (S)	88.9	%		76-127		SW846 8260B			12/27/13 13:08	TMP	B

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.



Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416003** Date Collected: 12/17/2013 13:15 Matrix: Ground Water
Sample ID: **MW-002_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		10.0	3.1	SW846 8260B			12/27/13 06:17	DD	A
tert-Amyl methyl ether	ND	ug/L		1.0	0.20	SW846 8260B			12/27/13 06:17	DD	A
tert-Amyl Alcohol	ND	ug/L	1	10.0	6.6	SW846 8260B			12/27/13 06:17	DD	A
tert-Amyl Ethylether	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:17	DD	A
Benzene	13.5	ug/L		1.0	0.23	SW846 8260B			12/27/13 06:17	DD	A
Bromochloromethane	ND	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:17	DD	A
Bromodichloromethane	ND	ug/L		1.0	0.27	SW846 8260B			12/27/13 06:17	DD	A
Bromoform	ND	ug/L	2	1.0	0.40	SW846 8260B			12/27/13 06:17	DD	A
Bromomethane	ND	ug/L		1.0	0.39	SW846 8260B			12/27/13 06:17	DD	A
2-Butanone	ND	ug/L		10.0	1.8	SW846 8260B			12/27/13 06:17	DD	A
tert-Butyl Alcohol	11.3	ug/L		10.0	2.2	SW846 8260B			12/27/13 06:17	DD	A
Carbon Disulfide	ND	ug/L		1.0	0.23	SW846 8260B			12/27/13 06:17	DD	A
Carbon Tetrachloride	ND	ug/L		1.0	0.31	SW846 8260B			12/27/13 06:17	DD	A
Chlorobenzene	ND	ug/L		1.0	0.19	SW846 8260B			12/27/13 06:17	DD	A
Chlorodibromomethane	ND	ug/L	3	1.0	0.45	SW846 8260B			12/27/13 06:17	DD	A
Chloroethane	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:17	DD	A
Chloroform	ND	ug/L		1.0	0.21	SW846 8260B			12/27/13 06:17	DD	A
Chloromethane	ND	ug/L		1.0	0.31	SW846 8260B			12/27/13 06:17	DD	A
1,2-Dibromo-3-chloropropane	ND	ug/L		7.0	1.5	SW846 8260B			12/27/13 06:17	DD	A
1,2-Dibromoethane	ND	ug/L		1.0	0.28	SW846 8260B			12/27/13 06:17	DD	A
Dichlorodifluoromethane	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:17	DD	A
1,1-Dichloroethane	ND	ug/L		1.0	0.28	SW846 8260B			12/27/13 06:17	DD	A
1,2-Dichloroethane	ND	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:17	DD	A
1,1-Dichloroethene	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:17	DD	A
cis-1,2-Dichloroethene	ND	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:17	DD	A
trans-1,2-Dichloroethene	ND	ug/L		1.0	0.26	SW846 8260B			12/27/13 06:17	DD	A
Dichlorofluoromethane	ND	ug/L		1.0	0.37	SW846 8260B			12/27/13 06:17	DD	A
1,2-Dichloropropane	ND	ug/L		1.0	0.24	SW846 8260B			12/27/13 06:17	DD	A
cis-1,3-Dichloropropene	ND	ug/L	4	1.0	0.31	SW846 8260B			12/27/13 06:17	DD	A
trans-1,3-Dichloropropene	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:17	DD	A
Diisopropyl ether	ND	ug/L		1.0	0.25	SW846 8260B			12/27/13 06:17	DD	A
Ethyl tert-butyl ether	ND	ug/L		1.0	0.19	SW846 8260B			12/27/13 06:17	DD	A
Ethylbenzene	2.8	ug/L		1.0	0.34	SW846 8260B			12/27/13 06:17	DD	A
2-Hexanone	ND	ug/L		5.0	1.3	SW846 8260B			12/27/13 06:17	DD	A
Methyl t-Butyl Ether	9.4	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:17	DD	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		5.0	1.5	SW846 8260B			12/27/13 06:17	DD	A
Methylene Chloride	ND	ug/L		1.0	0.45	SW846 8260B			12/27/13 06:17	DD	A
Styrene	ND	ug/L		1.0	0.24	SW846 8260B			12/27/13 06:17	DD	A
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0	0.34	SW846 8260B			12/27/13 06:17	DD	A
Tetrachloroethene	ND	ug/L		1.0	0.35	SW846 8260B			12/27/13 06:17	DD	A

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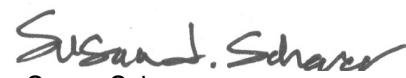
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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416003** Date Collected: 12/17/2013 13:15 Matrix: Ground Water
Sample ID: **MW-002_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene	21.3	ug/L		1.0	0.23	SW846 8260B			12/27/13 06:17	DD	A
Total Xylenes	20.1	ug/L		3.0	0.66	SW846 8260B			12/27/13 06:17	DD	A
1,1,1-Trichloroethane	ND	ug/L		1.0	0.22	SW846 8260B			12/27/13 06:17	DD	A
1,1,2-Trichloroethane	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:17	DD	A
Trichloroethene	0.50J	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:17	DD	A
Vinyl Chloride	ND	ug/L		1.0	0.30	SW846 8260B			12/27/13 06:17	DD	A
o-Xylene	5.6	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:17	DD	A
mp-Xylene	14.5	ug/L		2.0	0.52	SW846 8260B			12/27/13 06:17	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	112	%		62-133		SW846 8260B			12/27/13 06:17	DD	A
4-Bromofluorobenzene (S)	110	%		79-114		SW846 8260B			12/27/13 06:17	DD	A
Dibromofluoromethane (S)	89.6	%		78-116		SW846 8260B			12/27/13 06:17	DD	A
Toluene-d8 (S)	95.5	%		76-127		SW846 8260B			12/27/13 06:17	DD	A

Sample Comments:

Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416004** Date Collected: 12/17/2013 11:20 Matrix: Ground Water
Sample ID: **MW-003_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	50.1	ug/L		50.0	15.5	SW846 8260B			12/24/13 07:44	DD	A
tert-Amyl methyl ether	ND	ug/L		5.0	1.0	SW846 8260B			12/24/13 07:44	DD	A
tert-Amyl Alcohol	47.9J	ug/L	13	50.0	33.0	SW846 8260B			12/24/13 07:44	DD	A
tert-Amyl Ethylether	ND	ug/L		5.0	1.5	SW846 8260B			12/24/13 07:44	DD	A
Benzene	31.9	ug/L		5.0	1.2	SW846 8260B			12/24/13 07:44	DD	A
Bromochloromethane	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 07:44	DD	A
Bromodichloromethane	ND	ug/L		5.0	1.4	SW846 8260B			12/24/13 07:44	DD	A
Bromoform	ND	ug/L	14	5.0	2.0	SW846 8260B			12/24/13 07:44	DD	A
Bromomethane	ND	ug/L		5.0	2.0	SW846 8260B			12/24/13 07:44	DD	A
2-Butanone	13.9J	ug/L		50.0	9.0	SW846 8260B			12/24/13 07:44	DD	A
tert-Butyl Alcohol	129	ug/L		50.0	11.0	SW846 8260B			12/24/13 07:44	DD	A
Carbon Disulfide	ND	ug/L		5.0	1.2	SW846 8260B			12/24/13 07:44	DD	A
Carbon Tetrachloride	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 07:44	DD	A
Chlorobenzene	ND	ug/L		5.0	0.95	SW846 8260B			12/24/13 07:44	DD	A
Chlorodibromomethane	ND	ug/L		5.0	2.3	SW846 8260B			12/24/13 07:44	DD	A
Chloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 07:44	DD	A
Chloroform	ND	ug/L		5.0	1.1	SW846 8260B			12/24/13 07:44	DD	A
Chloromethane	3.9J	ug/L		5.0	1.6	SW846 8260B			12/24/13 07:44	DD	A
1,2-Dibromo-3-chloropropane	ND	ug/L		35.0	7.5	SW846 8260B			12/24/13 07:44	DD	A
1,2-Dibromoethane	ND	ug/L		5.0	1.4	SW846 8260B			12/24/13 07:44	DD	A
Dichlorodifluoromethane	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 07:44	DD	A
1,1-Dichloroethane	ND	ug/L		5.0	1.4	SW846 8260B			12/24/13 07:44	DD	A
1,2-Dichloroethane	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 07:44	DD	A
1,1-Dichloroethene	ND	ug/L		5.0	1.5	SW846 8260B			12/24/13 07:44	DD	A
cis-1,2-Dichloroethene	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 07:44	DD	A
trans-1,2-Dichloroethene	ND	ug/L		5.0	1.3	SW846 8260B			12/24/13 07:44	DD	A
Dichlorofluoromethane	ND	ug/L		5.0	1.9	SW846 8260B			12/24/13 07:44	DD	A
1,2-Dichloropropane	ND	ug/L		5.0	1.2	SW846 8260B			12/24/13 07:44	DD	A
cis-1,3-Dichloropropene	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 07:44	DD	A
trans-1,3-Dichloropropene	ND	ug/L		5.0	1.5	SW846 8260B			12/24/13 07:44	DD	A
Diisopropyl ether	2.9J	ug/L		5.0	1.3	SW846 8260B			12/24/13 07:44	DD	A
Ethyl tert-butyl ether	ND	ug/L		5.0	0.95	SW846 8260B			12/24/13 07:44	DD	A
Ethylbenzene	785	ug/L		50.0	17.0	SW846 8260B			12/27/13 13:25	TMP	B
2-Hexanone	ND	ug/L		25.0	6.5	SW846 8260B			12/24/13 07:44	DD	A
Methyl t-Butyl Ether	1.7J	ug/L		5.0	1.7	SW846 8260B			12/24/13 07:44	DD	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		25.0	7.5	SW846 8260B			12/24/13 07:44	DD	A
Methylene Chloride	ND	ug/L		5.0	2.3	SW846 8260B			12/24/13 07:44	DD	A
Styrene	ND	ug/L		5.0	1.2	SW846 8260B			12/24/13 07:44	DD	A
1,1,2,2-Tetrachloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 07:44	DD	A
Tetrachloroethene	ND	ug/L		5.0	1.8	SW846 8260B			12/24/13 07:44	DD	A

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416004** Date Collected: 12/17/2013 11:20 Matrix: Ground Water
Sample ID: **MW-003_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene	846	ug/L		5.0	1.2	SW846 8260B			12/24/13 07:44	DD	A
Total Xylenes	3810	ug/L		150	33.0	SW846 8260B			12/27/13 13:25	TMP	B
1,1,1-Trichloroethane	ND	ug/L		5.0	1.1	SW846 8260B			12/24/13 07:44	DD	A
1,1,2-Trichloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 07:44	DD	A
Trichloroethene	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 07:44	DD	A
Vinyl Chloride	ND	ug/L		5.0	1.5	SW846 8260B			12/24/13 07:44	DD	A
o-Xylene	1330	ug/L		50.0	16.5	SW846 8260B			12/27/13 13:25	TMP	B
mp-Xylene	2480	ug/L		100	26.0	SW846 8260B			12/27/13 13:25	TMP	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	91.4	%		62-133		SW846 8260B			12/24/13 07:44	DD	A
4-Bromofluorobenzene (S)	88.1	%		79-114		SW846 8260B			12/24/13 07:44	DD	A
Dibromofluoromethane (S)	79	%		78-116		SW846 8260B			12/24/13 07:44	DD	A
Toluene-d8 (S)	79.9	%		76-127		SW846 8260B			12/24/13 07:44	DD	A
1,2-Dichloroethane-d4 (S)	97.2	%		62-133		SW846 8260B			12/27/13 13:25	TMP	B
4-Bromofluorobenzene (S)	93.6	%		79-114		SW846 8260B			12/27/13 13:25	TMP	B
Dibromofluoromethane (S)	82.8	%		78-116		SW846 8260B			12/27/13 13:25	TMP	B
Toluene-d8 (S)	86.2	%		76-127		SW846 8260B			12/27/13 13:25	TMP	B

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.



Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416005** Date Collected: 12/17/2013 10:30 Matrix: Ground Water
Sample ID: **MW-003R_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		10.0	3.1	SW846 8260B			12/27/13 06:34	DD	A
tert-Amyl methyl ether	ND	ug/L		1.0	0.20	SW846 8260B			12/27/13 06:34	DD	A
tert-Amyl Alcohol	ND	ug/L	1	10.0	6.6	SW846 8260B			12/27/13 06:34	DD	A
tert-Amyl Ethylether	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:34	DD	A
Benzene	23.8	ug/L		1.0	0.23	SW846 8260B			12/27/13 06:34	DD	A
Bromochloromethane	ND	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:34	DD	A
Bromodichloromethane	ND	ug/L		1.0	0.27	SW846 8260B			12/27/13 06:34	DD	A
Bromoform	ND	ug/L	2	1.0	0.40	SW846 8260B			12/27/13 06:34	DD	A
Bromomethane	ND	ug/L		1.0	0.39	SW846 8260B			12/27/13 06:34	DD	A
2-Butanone	ND	ug/L		10.0	1.8	SW846 8260B			12/27/13 06:34	DD	A
tert-Butyl Alcohol	44.9	ug/L		10.0	2.2	SW846 8260B			12/27/13 06:34	DD	A
Carbon Disulfide	0.39J	ug/L		1.0	0.23	SW846 8260B			12/27/13 06:34	DD	A
Carbon Tetrachloride	ND	ug/L		1.0	0.31	SW846 8260B			12/27/13 06:34	DD	A
Chlorobenzene	ND	ug/L		1.0	0.19	SW846 8260B			12/27/13 06:34	DD	A
Chlorodibromomethane	ND	ug/L	3	1.0	0.45	SW846 8260B			12/27/13 06:34	DD	A
Chloroethane	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:34	DD	A
Chloroform	ND	ug/L		1.0	0.21	SW846 8260B			12/27/13 06:34	DD	A
Chloromethane	ND	ug/L		1.0	0.31	SW846 8260B			12/27/13 06:34	DD	A
1,2-Dibromo-3-chloropropane	ND	ug/L		7.0	1.5	SW846 8260B			12/27/13 06:34	DD	A
1,2-Dibromoethane	ND	ug/L		1.0	0.28	SW846 8260B			12/27/13 06:34	DD	A
Dichlorodifluoromethane	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:34	DD	A
1,1-Dichloroethane	ND	ug/L		1.0	0.28	SW846 8260B			12/27/13 06:34	DD	A
1,2-Dichloroethane	ND	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:34	DD	A
1,1-Dichloroethene	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:34	DD	A
cis-1,2-Dichloroethene	ND	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:34	DD	A
trans-1,2-Dichloroethene	ND	ug/L		1.0	0.26	SW846 8260B			12/27/13 06:34	DD	A
Dichlorofluoromethane	ND	ug/L		1.0	0.37	SW846 8260B			12/27/13 06:34	DD	A
1,2-Dichloropropane	ND	ug/L		1.0	0.24	SW846 8260B			12/27/13 06:34	DD	A
cis-1,3-Dichloropropene	ND	ug/L	4	1.0	0.31	SW846 8260B			12/27/13 06:34	DD	A
trans-1,3-Dichloropropene	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:34	DD	A
Diisopropyl ether	1.5	ug/L		1.0	0.25	SW846 8260B			12/27/13 06:34	DD	A
Ethyl tert-butyl ether	ND	ug/L		1.0	0.19	SW846 8260B			12/27/13 06:34	DD	A
Ethylbenzene	28.5	ug/L		1.0	0.34	SW846 8260B			12/27/13 06:34	DD	A
2-Hexanone	ND	ug/L		5.0	1.3	SW846 8260B			12/27/13 06:34	DD	A
Methyl t-Butyl Ether	1.1	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:34	DD	A
4-Methyl-2-Pentanone(MIBK)	2.2J	ug/L		5.0	1.5	SW846 8260B			12/27/13 06:34	DD	A
Methylene Chloride	ND	ug/L		1.0	0.45	SW846 8260B			12/27/13 06:34	DD	A
Styrene	0.24J	ug/L		1.0	0.24	SW846 8260B			12/27/13 06:34	DD	A
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0	0.34	SW846 8260B			12/27/13 06:34	DD	A
Tetrachloroethene	ND	ug/L		1.0	0.35	SW846 8260B			12/27/13 06:34	DD	A

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

 Lab ID: **1064416006** Date Collected: 12/17/2013 11:25 Matrix: Ground Water
 Sample ID: **MW-005_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	399	ug/L		50.0	15.5	SW846 8260B			12/24/13 09:28	DD	A
tert-Amyl methyl ether	ND	ug/L		5.0	1.0	SW846 8260B			12/24/13 09:28	DD	A
tert-Amyl Alcohol	675	ug/L	13	50.0	33.0	SW846 8260B			12/24/13 09:28	DD	A
tert-Amyl Ethylether	ND	ug/L		5.0	1.5	SW846 8260B			12/24/13 09:28	DD	A
Benzene	192	ug/L		5.0	1.2	SW846 8260B			12/24/13 09:28	DD	A
Bromochloromethane	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 09:28	DD	A
Bromodichloromethane	ND	ug/L		5.0	1.4	SW846 8260B			12/24/13 09:28	DD	A
Bromoform	ND	ug/L	14	5.0	2.0	SW846 8260B			12/24/13 09:28	DD	A
Bromomethane	ND	ug/L		5.0	2.0	SW846 8260B			12/24/13 09:28	DD	A
2-Butanone	33.2J	ug/L		50.0	9.0	SW846 8260B			12/24/13 09:28	DD	A
tert-Butyl Alcohol	263	ug/L		50.0	11.0	SW846 8260B			12/24/13 09:28	DD	A
Carbon Disulfide	ND	ug/L		5.0	1.2	SW846 8260B			12/24/13 09:28	DD	A
Carbon Tetrachloride	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 09:28	DD	A
Chlorobenzene	ND	ug/L		5.0	0.95	SW846 8260B			12/24/13 09:28	DD	A
Chlorodibromomethane	ND	ug/L		5.0	2.3	SW846 8260B			12/24/13 09:28	DD	A
Chloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 09:28	DD	A
Chloroform	ND	ug/L		5.0	1.1	SW846 8260B			12/24/13 09:28	DD	A
Chloromethane	65.5	ug/L		5.0	1.6	SW846 8260B			12/24/13 09:28	DD	A
1,2-Dibromo-3-chloropropane	ND	ug/L		35.0	7.5	SW846 8260B			12/24/13 09:28	DD	A
1,2-Dibromoethane	ND	ug/L		5.0	1.4	SW846 8260B			12/24/13 09:28	DD	A
Dichlorodifluoromethane	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 09:28	DD	A
1,1-Dichloroethane	ND	ug/L		5.0	1.4	SW846 8260B			12/24/13 09:28	DD	A
1,2-Dichloroethane	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 09:28	DD	A
1,1-Dichloroethene	ND	ug/L		5.0	1.5	SW846 8260B			12/24/13 09:28	DD	A
cis-1,2-Dichloroethene	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 09:28	DD	A
trans-1,2-Dichloroethene	ND	ug/L		5.0	1.3	SW846 8260B			12/24/13 09:28	DD	A
Dichlorofluoromethane	ND	ug/L		5.0	1.9	SW846 8260B			12/24/13 09:28	DD	A
1,2-Dichloropropane	ND	ug/L		5.0	1.2	SW846 8260B			12/24/13 09:28	DD	A
cis-1,3-Dichloropropene	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 09:28	DD	A
trans-1,3-Dichloropropene	ND	ug/L		5.0	1.5	SW846 8260B			12/24/13 09:28	DD	A
Diisopropyl ether	6.3	ug/L		5.0	1.3	SW846 8260B			12/24/13 09:28	DD	A
Ethyl tert-butyl ether	6.0	ug/L		5.0	0.95	SW846 8260B			12/24/13 09:28	DD	A
Ethylbenzene	1860	ug/L		250	85.0	SW846 8260B			12/27/13 15:59	TMP	B
2-Hexanone	ND	ug/L		25.0	6.5	SW846 8260B			12/24/13 09:28	DD	A
Methyl t-Butyl Ether	10.7	ug/L		5.0	1.7	SW846 8260B			12/24/13 09:28	DD	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		25.0	7.5	SW846 8260B			12/24/13 09:28	DD	A
Methylene Chloride	ND	ug/L		5.0	2.3	SW846 8260B			12/24/13 09:28	DD	A
Styrene	ND	ug/L		5.0	1.2	SW846 8260B			12/24/13 09:28	DD	A
1,1,2,2-Tetrachloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 09:28	DD	A
Tetrachloroethene	ND	ug/L		5.0	1.8	SW846 8260B			12/24/13 09:28	DD	A

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ANALYTICAL RESULTS


Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416006** Date Collected: 12/17/2013 11:25 Matrix: Ground Water
Sample ID: **MW-005_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene	ND	ug/L		5.0	1.2	SW846 8260B			12/24/13 09:28	DD	A
Total Xylenes	9510	ug/L		750	165	SW846 8260B			12/27/13 15:59	TMP	B
1,1,1-Trichloroethane	ND	ug/L		5.0	1.1	SW846 8260B			12/24/13 09:28	DD	A
1,1,2-Trichloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 09:28	DD	A
Trichloroethene	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 09:28	DD	A
Vinyl Chloride	ND	ug/L		5.0	1.5	SW846 8260B			12/24/13 09:28	DD	A
o-Xylene	2990	ug/L		250	82.5	SW846 8260B			12/27/13 15:59	TMP	B
mp-Xylene	6530	ug/L		500	130	SW846 8260B			12/27/13 15:59	TMP	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.1	%		62-133		SW846 8260B			12/24/13 09:28	DD	A
4-Bromofluorobenzene (S)	81.7	%		79-114		SW846 8260B			12/24/13 09:28	DD	A
Dibromofluoromethane (S)	74.9	%	15	78-116		SW846 8260B			12/24/13 09:28	DD	A
Toluene-d8 (S)	78.2	%		76-127		SW846 8260B			12/24/13 09:28	DD	A
1,2-Dichloroethane-d4 (S)	98	%		62-133		SW846 8260B			12/27/13 15:59	TMP	B
4-Bromofluorobenzene (S)	96.4	%		79-114		SW846 8260B			12/27/13 15:59	TMP	B
Dibromofluoromethane (S)	81.8	%		78-116		SW846 8260B			12/27/13 15:59	TMP	B
Toluene-d8 (S)	86.7	%		76-127		SW846 8260B			12/27/13 15:59	TMP	B

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416007** Date Collected: 12/17/2013 10:25 Matrix: Ground Water
Sample ID: **MW-005R_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	653J	ug/L		1000	310	SW846 8260B			12/24/13 08:36	DD	A
tert-Amyl methyl ether	ND	ug/L		100	20.0	SW846 8260B			12/24/13 08:36	DD	A
tert-Amyl Alcohol	ND	ug/L	13	1000	660	SW846 8260B			12/24/13 08:36	DD	A
tert-Amyl Ethylether	ND	ug/L		100	29.0	SW846 8260B			12/24/13 08:36	DD	A
Benzene	6140	ug/L		100	23.0	SW846 8260B			12/24/13 08:36	DD	A
Bromochloromethane	ND	ug/L		100	32.0	SW846 8260B			12/24/13 08:36	DD	A
Bromodichloromethane	ND	ug/L		100	27.0	SW846 8260B			12/24/13 08:36	DD	A
Bromoform	ND	ug/L	14	100	40.0	SW846 8260B			12/24/13 08:36	DD	A
Bromomethane	ND	ug/L		100	39.0	SW846 8260B			12/24/13 08:36	DD	A
2-Butanone	677J	ug/L		1000	180	SW846 8260B			12/24/13 08:36	DD	A
tert-Butyl Alcohol	502J	ug/L		1000	220	SW846 8260B			12/24/13 08:36	DD	A
Carbon Disulfide	ND	ug/L		100	23.0	SW846 8260B			12/24/13 08:36	DD	A
Carbon Tetrachloride	ND	ug/L		100	31.0	SW846 8260B			12/24/13 08:36	DD	A
Chlorobenzene	ND	ug/L		100	19.0	SW846 8260B			12/24/13 08:36	DD	A
Chlorodibromomethane	ND	ug/L		100	45.0	SW846 8260B			12/24/13 08:36	DD	A
Chloroethane	ND	ug/L		100	33.0	SW846 8260B			12/24/13 08:36	DD	A
Chloroform	ND	ug/L		100	21.0	SW846 8260B			12/24/13 08:36	DD	A
Chloromethane	ND	ug/L		100	31.0	SW846 8260B			12/24/13 08:36	DD	A
1,2-Dibromo-3-chloropropane	ND	ug/L		700	150	SW846 8260B			12/24/13 08:36	DD	A
1,2-Dibromoethane	ND	ug/L		100	28.0	SW846 8260B			12/24/13 08:36	DD	A
Dichlorodifluoromethane	ND	ug/L		100	33.0	SW846 8260B			12/24/13 08:36	DD	A
1,1-Dichloroethane	ND	ug/L		100	28.0	SW846 8260B			12/24/13 08:36	DD	A
1,2-Dichloroethane	ND	ug/L		100	32.0	SW846 8260B			12/24/13 08:36	DD	A
1,1-Dichloroethene	ND	ug/L		100	29.0	SW846 8260B			12/24/13 08:36	DD	A
cis-1,2-Dichloroethene	ND	ug/L		100	32.0	SW846 8260B			12/24/13 08:36	DD	A
trans-1,2-Dichloroethene	ND	ug/L		100	26.0	SW846 8260B			12/24/13 08:36	DD	A
Dichlorofluoromethane	ND	ug/L		100	37.0	SW846 8260B			12/24/13 08:36	DD	A
1,2-Dichloropropane	ND	ug/L		100	24.0	SW846 8260B			12/24/13 08:36	DD	A
cis-1,3-Dichloropropene	ND	ug/L		100	31.0	SW846 8260B			12/24/13 08:36	DD	A
trans-1,3-Dichloropropene	ND	ug/L		100	29.0	SW846 8260B			12/24/13 08:36	DD	A
Diisopropyl ether	ND	ug/L		100	25.0	SW846 8260B			12/24/13 08:36	DD	A
Ethyl tert-butyl ether	ND	ug/L		100	19.0	SW846 8260B			12/24/13 08:36	DD	A
Ethylbenzene	1240	ug/L		100	34.0	SW846 8260B			12/24/13 08:36	DD	A
2-Hexanone	ND	ug/L		500	130	SW846 8260B			12/24/13 08:36	DD	A
Methyl t-Butyl Ether	ND	ug/L		100	33.0	SW846 8260B			12/24/13 08:36	DD	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		500	150	SW846 8260B			12/24/13 08:36	DD	A
Methylene Chloride	ND	ug/L		100	45.0	SW846 8260B			12/24/13 08:36	DD	A
Styrene	ND	ug/L		100	24.0	SW846 8260B			12/24/13 08:36	DD	A
1,1,2,2-Tetrachloroethane	ND	ug/L		100	34.0	SW846 8260B			12/24/13 08:36	DD	A
Tetrachloroethene	ND	ug/L		100	35.0	SW846 8260B			12/24/13 08:36	DD	A

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ANALYTICAL RESULTS


Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416007** Date Collected: 12/17/2013 10:25 Matrix: Ground Water
Sample ID: **MW-005R_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene	20900	ug/L		500	115	SW846 8260B			12/27/13 16:16	TMP	B
Total Xylenes	6300	ug/L		1500	330	SW846 8260B			12/27/13 16:16	TMP	B
1,1,1-Trichloroethane	ND	ug/L		100	22.0	SW846 8260B			12/24/13 08:36	DD	A
1,1,2-Trichloroethane	ND	ug/L		100	33.0	SW846 8260B			12/24/13 08:36	DD	A
Trichloroethene	ND	ug/L		100	33.0	SW846 8260B			12/24/13 08:36	DD	A
Vinyl Chloride	ND	ug/L		100	30.0	SW846 8260B			12/24/13 08:36	DD	A
o-Xylene	1840	ug/L		500	165	SW846 8260B			12/27/13 16:16	TMP	B
mp-Xylene	4460	ug/L		1000	260	SW846 8260B			12/27/13 16:16	TMP	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	91.3	%		62-133		SW846 8260B			12/24/13 08:36	DD	A
4-Bromofluorobenzene (S)	94.9	%		79-114		SW846 8260B			12/24/13 08:36	DD	A
Dibromofluoromethane (S)	79.6	%		78-116		SW846 8260B			12/24/13 08:36	DD	A
Toluene-d8 (S)	83.5	%		76-127		SW846 8260B			12/24/13 08:36	DD	A
1,2-Dichloroethane-d4 (S)	97.8	%		62-133		SW846 8260B			12/27/13 16:16	TMP	B
4-Bromofluorobenzene (S)	102	%		79-114		SW846 8260B			12/27/13 16:16	TMP	B
Dibromofluoromethane (S)	83.4	%		78-116		SW846 8260B			12/27/13 16:16	TMP	B
Toluene-d8 (S)	90.3	%		76-127		SW846 8260B			12/27/13 16:16	TMP	B

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416008** Date Collected: 12/17/2013 14:20 Matrix: Ground Water
Sample ID: **MW-006_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		10.0	3.1	SW846 8260B			12/27/13 06:51	DD	A
tert-Amyl methyl ether	ND	ug/L		1.0	0.20	SW846 8260B			12/27/13 06:51	DD	A
tert-Amyl Alcohol	ND	ug/L	1	10.0	6.6	SW846 8260B			12/27/13 06:51	DD	A
tert-Amyl Ethylether	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:51	DD	A
Benzene	3.2	ug/L		1.0	0.23	SW846 8260B			12/27/13 06:51	DD	A
Bromochloromethane	ND	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:51	DD	A
Bromodichloromethane	ND	ug/L		1.0	0.27	SW846 8260B			12/27/13 06:51	DD	A
Bromoform	ND	ug/L	2	1.0	0.40	SW846 8260B			12/27/13 06:51	DD	A
Bromomethane	ND	ug/L		1.0	0.39	SW846 8260B			12/27/13 06:51	DD	A
2-Butanone	ND	ug/L		10.0	1.8	SW846 8260B			12/27/13 06:51	DD	A
tert-Butyl Alcohol	ND	ug/L		10.0	2.2	SW846 8260B			12/27/13 06:51	DD	A
Carbon Disulfide	0.38J	ug/L		1.0	0.23	SW846 8260B			12/27/13 06:51	DD	A
Carbon Tetrachloride	ND	ug/L		1.0	0.31	SW846 8260B			12/27/13 06:51	DD	A
Chlorobenzene	3.9	ug/L		1.0	0.19	SW846 8260B			12/27/13 06:51	DD	A
Chlorodibromomethane	ND	ug/L	3	1.0	0.45	SW846 8260B			12/27/13 06:51	DD	A
Chloroethane	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:51	DD	A
Chloroform	ND	ug/L		1.0	0.21	SW846 8260B			12/27/13 06:51	DD	A
Chloromethane	ND	ug/L		1.0	0.31	SW846 8260B			12/27/13 06:51	DD	A
1,2-Dibromo-3-chloropropane	ND	ug/L		7.0	1.5	SW846 8260B			12/27/13 06:51	DD	A
1,2-Dibromoethane	ND	ug/L		1.0	0.28	SW846 8260B			12/27/13 06:51	DD	A
Dichlorodifluoromethane	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:51	DD	A
1,1-Dichloroethane	ND	ug/L		1.0	0.28	SW846 8260B			12/27/13 06:51	DD	A
1,2-Dichloroethane	ND	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:51	DD	A
1,1-Dichloroethene	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:51	DD	A
cis-1,2-Dichloroethene	ND	ug/L		1.0	0.32	SW846 8260B			12/27/13 06:51	DD	A
trans-1,2-Dichloroethene	ND	ug/L		1.0	0.26	SW846 8260B			12/27/13 06:51	DD	A
Dichlorofluoromethane	ND	ug/L		1.0	0.37	SW846 8260B			12/27/13 06:51	DD	A
1,2-Dichloropropane	ND	ug/L		1.0	0.24	SW846 8260B			12/27/13 06:51	DD	A
cis-1,3-Dichloropropene	ND	ug/L	4	1.0	0.31	SW846 8260B			12/27/13 06:51	DD	A
trans-1,3-Dichloropropene	ND	ug/L		1.0	0.29	SW846 8260B			12/27/13 06:51	DD	A
Diisopropyl ether	ND	ug/L		1.0	0.25	SW846 8260B			12/27/13 06:51	DD	A
Ethyl tert-butyl ether	ND	ug/L		1.0	0.19	SW846 8260B			12/27/13 06:51	DD	A
Ethylbenzene	10.5	ug/L		1.0	0.34	SW846 8260B			12/27/13 06:51	DD	A
2-Hexanone	ND	ug/L		5.0	1.3	SW846 8260B			12/27/13 06:51	DD	A
Methyl t-Butyl Ether	0.58J	ug/L		1.0	0.33	SW846 8260B			12/27/13 06:51	DD	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		5.0	1.5	SW846 8260B			12/27/13 06:51	DD	A
Methylene Chloride	ND	ug/L		1.0	0.45	SW846 8260B			12/27/13 06:51	DD	A
Styrene	ND	ug/L		1.0	0.24	SW846 8260B			12/27/13 06:51	DD	A
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0	0.34	SW846 8260B			12/27/13 06:51	DD	A
Tetrachloroethene	ND	ug/L		1.0	0.35	SW846 8260B			12/27/13 06:51	DD	A

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416009** Date Collected: 12/17/2013 14:00 Matrix: Ground Water
Sample ID: **MW-007_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		50.0	15.5	SW846 8260B			12/24/13 06:36	DD	A
tert-Amyl methyl ether	ND	ug/L		5.0	1.0	SW846 8260B			12/24/13 06:36	DD	A
tert-Amyl Alcohol	37.0J	ug/L	13	50.0	33.0	SW846 8260B			12/24/13 06:36	DD	A
tert-Amyl Ethylether	ND	ug/L		5.0	1.5	SW846 8260B			12/24/13 06:36	DD	A
Benzene	431	ug/L		5.0	1.2	SW846 8260B			12/24/13 06:36	DD	A
Bromochloromethane	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 06:36	DD	A
Bromodichloromethane	ND	ug/L		5.0	1.4	SW846 8260B			12/24/13 06:36	DD	A
Bromoform	ND	ug/L	14	5.0	2.0	SW846 8260B			12/24/13 06:36	DD	A
Bromomethane	ND	ug/L		5.0	2.0	SW846 8260B			12/24/13 06:36	DD	A
2-Butanone	ND	ug/L		50.0	9.0	SW846 8260B			12/24/13 06:36	DD	A
tert-Butyl Alcohol	ND	ug/L		50.0	11.0	SW846 8260B			12/24/13 06:36	DD	A
Carbon Disulfide	ND	ug/L		5.0	1.2	SW846 8260B			12/24/13 06:36	DD	A
Carbon Tetrachloride	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 06:36	DD	A
Chlorobenzene	ND	ug/L		5.0	0.95	SW846 8260B			12/24/13 06:36	DD	A
Chlorodibromomethane	ND	ug/L		5.0	2.3	SW846 8260B			12/24/13 06:36	DD	A
Chloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 06:36	DD	A
Chloroform	ND	ug/L		5.0	1.1	SW846 8260B			12/24/13 06:36	DD	A
Chloromethane	8.4	ug/L		5.0	1.6	SW846 8260B			12/24/13 06:36	DD	A
1,2-Dibromo-3-chloropropane	ND	ug/L		35.0	7.5	SW846 8260B			12/24/13 06:36	DD	A
1,2-Dibromoethane	ND	ug/L		5.0	1.4	SW846 8260B			12/24/13 06:36	DD	A
Dichlorodifluoromethane	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 06:36	DD	A
1,1-Dichloroethane	ND	ug/L		5.0	1.4	SW846 8260B			12/24/13 06:36	DD	A
1,2-Dichloroethane	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 06:36	DD	A
1,1-Dichloroethene	ND	ug/L		5.0	1.5	SW846 8260B			12/24/13 06:36	DD	A
cis-1,2-Dichloroethene	1.9J	ug/L		5.0	1.6	SW846 8260B			12/24/13 06:36	DD	A
trans-1,2-Dichloroethene	ND	ug/L		5.0	1.3	SW846 8260B			12/24/13 06:36	DD	A
Dichlorofluoromethane	ND	ug/L		5.0	1.9	SW846 8260B			12/24/13 06:36	DD	A
1,2-Dichloropropane	ND	ug/L		5.0	1.2	SW846 8260B			12/24/13 06:36	DD	A
cis-1,3-Dichloropropene	ND	ug/L		5.0	1.6	SW846 8260B			12/24/13 06:36	DD	A
trans-1,3-Dichloropropene	ND	ug/L		5.0	1.5	SW846 8260B			12/24/13 06:36	DD	A
Diisopropyl ether	ND	ug/L		5.0	1.3	SW846 8260B			12/24/13 06:36	DD	A
Ethyl tert-butyl ether	ND	ug/L		5.0	0.95	SW846 8260B			12/24/13 06:36	DD	A
Ethylbenzene	177	ug/L		5.0	1.7	SW846 8260B			12/24/13 06:36	DD	A
2-Hexanone	ND	ug/L		25.0	6.5	SW846 8260B			12/24/13 06:36	DD	A
Methyl t-Butyl Ether	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 06:36	DD	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		25.0	7.5	SW846 8260B			12/24/13 06:36	DD	A
Methylene Chloride	ND	ug/L		5.0	2.3	SW846 8260B			12/24/13 06:36	DD	A
Styrene	2.2J	ug/L		5.0	1.2	SW846 8260B			12/24/13 06:36	DD	A
1,1,2,2-Tetrachloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/24/13 06:36	DD	A
Tetrachloroethene	ND	ug/L		5.0	1.8	SW846 8260B			12/24/13 06:36	DD	A

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: 1064416010 **Date Collected:** 12/17/2013 12:20 **Matrix:** Ground Water
Sample ID: MW-008_20131217_N **Date Received:** 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	ND	ug/L		100	31.0	SW846 8260B		12/27/13 16:51	TMP	B
tert-Amyl methyl ether	ND	ug/L	5	10.0	2.0	SW846 8260B		12/27/13 16:51	TMP	B
tert-Amyl Alcohol	203	ug/L	6	100	66.0	SW846 8260B		12/27/13 16:51	TMP	B
tert-Amyl Ethylether	ND	ug/L	7	10.0	2.9	SW846 8260B		12/27/13 16:51	TMP	B
Benzene	359	ug/L		10.0	2.3	SW846 8260B		12/27/13 16:51	TMP	B
Bromochloromethane	ND	ug/L		10.0	3.2	SW846 8260B		12/27/13 16:51	TMP	B
Bromodichloromethane	ND	ug/L	8	10.0	2.7	SW846 8260B		12/27/13 16:51	TMP	B
Bromoform	ND	ug/L	9	10.0	4.0	SW846 8260B		12/27/13 16:51	TMP	B
Bromomethane	ND	ug/L		10.0	3.9	SW846 8260B		12/27/13 16:51	TMP	B
2-Butanone	ND	ug/L		100	18.0	SW846 8260B		12/27/13 16:51	TMP	B
tert-Butyl Alcohol	459	ug/L		100	22.0	SW846 8260B		12/27/13 16:51	TMP	B
Carbon Disulfide	ND	ug/L		10.0	2.3	SW846 8260B		12/27/13 16:51	TMP	B
Carbon Tetrachloride	ND	ug/L		10.0	3.1	SW846 8260B		12/27/13 16:51	TMP	B
Chlorobenzene	ND	ug/L		10.0	1.9	SW846 8260B		12/27/13 16:51	TMP	B
Chlorodibromomethane	ND	ug/L	10	10.0	4.5	SW846 8260B		12/27/13 16:51	TMP	B
Chloroethane	ND	ug/L		10.0	3.3	SW846 8260B		12/27/13 16:51	TMP	B
Chloroform	ND	ug/L		10.0	2.1	SW846 8260B		12/27/13 16:51	TMP	B
Chloromethane	ND	ug/L		10.0	3.1	SW846 8260B		12/27/13 16:51	TMP	B
1,2-Dibromo-3-chloropropane	ND	ug/L		70.0	15.0	SW846 8260B		12/27/13 16:51	TMP	B
1,2-Dibromoethane	ND	ug/L		10.0	2.8	SW846 8260B		12/27/13 16:51	TMP	B
Dichlorodifluoromethane	ND	ug/L		10.0	3.3	SW846 8260B		12/27/13 16:51	TMP	B
1,1-Dichloroethane	ND	ug/L		10.0	2.8	SW846 8260B		12/27/13 16:51	TMP	B
1,2-Dichloroethane	16.3	ug/L		10.0	3.2	SW846 8260B		12/27/13 16:51	TMP	B
1,1-Dichloroethene	ND	ug/L		10.0	2.9	SW846 8260B		12/27/13 16:51	TMP	B
cis-1,2-Dichloroethene	ND	ug/L		10.0	3.2	SW846 8260B		12/27/13 16:51	TMP	B
trans-1,2-Dichloroethene	ND	ug/L		10.0	2.6	SW846 8260B		12/27/13 16:51	TMP	B
Dichlorofluoromethane	ND	ug/L		10.0	3.7	SW846 8260B		12/27/13 16:51	TMP	B
1,2-Dichloropropane	ND	ug/L		10.0	2.4	SW846 8260B		12/27/13 16:51	TMP	B
cis-1,3-Dichloropropene	ND	ug/L	11	10.0	3.1	SW846 8260B		12/27/13 16:51	TMP	B
trans-1,3-Dichloropropene	ND	ug/L	12	10.0	2.9	SW846 8260B		12/27/13 16:51	TMP	B
Diisopropyl ether	11.2	ug/L		10.0	2.5	SW846 8260B		12/27/13 16:51	TMP	B
Ethyl tert-butyl ether	5.6J	ug/L		10.0	1.9	SW846 8260B		12/27/13 16:51	TMP	B
Ethylbenzene	63.3	ug/L		10.0	3.4	SW846 8260B		12/27/13 16:51	TMP	B
2-Hexanone	ND	ug/L		50.0	13.0	SW846 8260B		12/27/13 16:51	TMP	B
Methyl t-Butyl Ether	532	ug/L		10.0	3.3	SW846 8260B		12/27/13 16:51	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		50.0	15.0	SW846 8260B		12/27/13 16:51	TMP	B
Methylene Chloride	ND	ug/L		10.0	4.5	SW846 8260B		12/27/13 16:51	TMP	B
Styrene	ND	ug/L		10.0	2.4	SW846 8260B		12/27/13 16:51	TMP	B
1,1,2,2-Tetrachloroethane	ND	ug/L		10.0	3.4	SW846 8260B		12/27/13 16:51	TMP	B
Tetrachloroethene	ND	ug/L		10.0	3.5	SW846 8260B		12/27/13 16:51	TMP	B

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ANALYTICAL RESULTS

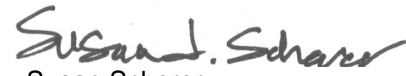
Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416010** Date Collected: 12/17/2013 12:20 Matrix: Ground Water
Sample ID: **MW-008_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene	16.9	ug/L		10.0	2.3	SW846 8260B			12/27/13 16:51	TMP	B
Total Xylenes	28.9J	ug/L		30.0	6.6	SW846 8260B			12/27/13 16:51	TMP	B
1,1,1-Trichloroethane	ND	ug/L		10.0	2.2	SW846 8260B			12/27/13 16:51	TMP	B
1,1,2-Trichloroethane	ND	ug/L		10.0	3.3	SW846 8260B			12/27/13 16:51	TMP	B
Trichloroethene	ND	ug/L		10.0	3.3	SW846 8260B			12/27/13 16:51	TMP	B
Vinyl Chloride	ND	ug/L		10.0	3.0	SW846 8260B			12/27/13 16:51	TMP	B
o-Xylene	4.0J	ug/L		10.0	3.3	SW846 8260B			12/27/13 16:51	TMP	B
mp-Xylene	24.9	ug/L		20.0	5.2	SW846 8260B			12/27/13 16:51	TMP	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	97.4	%		62-133		SW846 8260B			12/27/13 16:51	TMP	B
4-Bromofluorobenzene (S)	95.6	%		79-114		SW846 8260B			12/27/13 16:51	TMP	B
Dibromofluoromethane (S)	81.6	%		78-116		SW846 8260B			12/27/13 16:51	TMP	B
Toluene-d8 (S)	89	%		76-127		SW846 8260B			12/27/13 16:51	TMP	B

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416011** Date Collected: 12/18/2013 14:20 Matrix: Ground Water
Sample ID: **MW-008D_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	ND	ug/L		10.0	3.1	SW846 8260B		12/27/13 07:09	DD	A
tert-Amyl methyl ether	ND	ug/L		1.0	0.20	SW846 8260B		12/27/13 07:09	DD	A
tert-Amyl Alcohol	ND	ug/L	1	10.0	6.6	SW846 8260B		12/27/13 07:09	DD	A
tert-Amyl Ethylether	ND	ug/L		1.0	0.29	SW846 8260B		12/27/13 07:09	DD	A
Benzene	0.97J	ug/L		1.0	0.23	SW846 8260B		12/27/13 07:09	DD	A
Bromochloromethane	ND	ug/L		1.0	0.32	SW846 8260B		12/27/13 07:09	DD	A
Bromodichloromethane	ND	ug/L		1.0	0.27	SW846 8260B		12/27/13 07:09	DD	A
Bromoform	ND	ug/L	2	1.0	0.40	SW846 8260B		12/27/13 07:09	DD	A
Bromomethane	ND	ug/L		1.0	0.39	SW846 8260B		12/27/13 07:09	DD	A
2-Butanone	ND	ug/L		10.0	1.8	SW846 8260B		12/27/13 07:09	DD	A
tert-Butyl Alcohol	ND	ug/L		10.0	2.2	SW846 8260B		12/27/13 07:09	DD	A
Carbon Disulfide	ND	ug/L		1.0	0.23	SW846 8260B		12/27/13 07:09	DD	A
Carbon Tetrachloride	ND	ug/L		1.0	0.31	SW846 8260B		12/27/13 07:09	DD	A
Chlorobenzene	ND	ug/L		1.0	0.19	SW846 8260B		12/27/13 07:09	DD	A
Chlorodibromomethane	ND	ug/L	3	1.0	0.45	SW846 8260B		12/27/13 07:09	DD	A
Chloroethane	ND	ug/L		1.0	0.33	SW846 8260B		12/27/13 07:09	DD	A
Chloroform	ND	ug/L		1.0	0.21	SW846 8260B		12/27/13 07:09	DD	A
Chloromethane	ND	ug/L		1.0	0.31	SW846 8260B		12/27/13 07:09	DD	A
1,2-Dibromo-3-chloropropane	ND	ug/L		7.0	1.5	SW846 8260B		12/27/13 07:09	DD	A
1,2-Dibromoethane	ND	ug/L		1.0	0.28	SW846 8260B		12/27/13 07:09	DD	A
Dichlorodifluoromethane	ND	ug/L		1.0	0.33	SW846 8260B		12/27/13 07:09	DD	A
1,1-Dichloroethane	ND	ug/L		1.0	0.28	SW846 8260B		12/27/13 07:09	DD	A
1,2-Dichloroethane	ND	ug/L		1.0	0.32	SW846 8260B		12/27/13 07:09	DD	A
1,1-Dichloroethene	ND	ug/L		1.0	0.29	SW846 8260B		12/27/13 07:09	DD	A
cis-1,2-Dichloroethene	ND	ug/L		1.0	0.32	SW846 8260B		12/27/13 07:09	DD	A
trans-1,2-Dichloroethene	ND	ug/L		1.0	0.26	SW846 8260B		12/27/13 07:09	DD	A
Dichlorofluoromethane	ND	ug/L		1.0	0.37	SW846 8260B		12/27/13 07:09	DD	A
1,2-Dichloropropane	ND	ug/L		1.0	0.24	SW846 8260B		12/27/13 07:09	DD	A
cis-1,3-Dichloropropene	ND	ug/L	4	1.0	0.31	SW846 8260B		12/27/13 07:09	DD	A
trans-1,3-Dichloropropene	ND	ug/L		1.0	0.29	SW846 8260B		12/27/13 07:09	DD	A
Diisopropyl ether	ND	ug/L		1.0	0.25	SW846 8260B		12/27/13 07:09	DD	A
Ethyl tert-butyl ether	ND	ug/L		1.0	0.19	SW846 8260B		12/27/13 07:09	DD	A
Ethylbenzene	ND	ug/L		1.0	0.34	SW846 8260B		12/27/13 07:09	DD	A
2-Hexanone	ND	ug/L		5.0	1.3	SW846 8260B		12/27/13 07:09	DD	A
Methyl t-Butyl Ether	ND	ug/L		1.0	0.33	SW846 8260B		12/27/13 07:09	DD	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		5.0	1.5	SW846 8260B		12/27/13 07:09	DD	A
Methylene Chloride	ND	ug/L		1.0	0.45	SW846 8260B		12/27/13 07:09	DD	A
Styrene	ND	ug/L		1.0	0.24	SW846 8260B		12/27/13 07:09	DD	A
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0	0.34	SW846 8260B		12/27/13 07:09	DD	A
Tetrachloroethene	ND	ug/L		1.0	0.35	SW846 8260B		12/27/13 07:09	DD	A

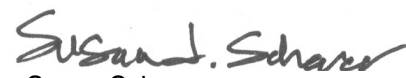
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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: 1064416011 **Date Collected:** 12/18/2013 14:20 **Matrix:** Ground Water
Sample ID: MW-008D_20131217_N **Date Received:** 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene	1.4	ug/L		1.0	0.23	SW846 8260B			12/27/13 07:09	DD	A
Total Xylenes	2.0J	ug/L		3.0	0.66	SW846 8260B			12/27/13 07:09	DD	A
1,1,1-Trichloroethane	ND	ug/L		1.0	0.22	SW846 8260B			12/27/13 07:09	DD	A
1,1,2-Trichloroethane	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 07:09	DD	A
Trichloroethene	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 07:09	DD	A
Vinyl Chloride	ND	ug/L		1.0	0.30	SW846 8260B			12/27/13 07:09	DD	A
o-Xylene	ND	ug/L		1.0	0.33	SW846 8260B			12/27/13 07:09	DD	A
mp-Xylene	2.0J	ug/L		2.0	0.52	SW846 8260B			12/27/13 07:09	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	106	%		62-133		SW846 8260B			12/27/13 07:09	DD	A
4-Bromofluorobenzene (S)	116	%	17	79-114		SW846 8260B			12/27/13 07:09	DD	A
Dibromofluoromethane (S)	88	%		78-116		SW846 8260B			12/27/13 07:09	DD	A
Toluene-d8 (S)	94.9	%		76-127		SW846 8260B			12/27/13 07:09	DD	A

Sample Comments:


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416012** Date Collected: 12/18/2013 12:20 Matrix: Ground Water
Sample ID: **MP-001_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		100	31.0	SW846 8260B			12/24/13 08:53	DD	A
tert-Amyl methyl ether	ND	ug/L		10.0	2.0	SW846 8260B			12/24/13 08:53	DD	A
tert-Amyl Alcohol	438	ug/L	13	100	66.0	SW846 8260B			12/24/13 08:53	DD	A
tert-Amyl Ethylether	ND	ug/L		10.0	2.9	SW846 8260B			12/24/13 08:53	DD	A
Benzene	423	ug/L		10.0	2.3	SW846 8260B			12/24/13 08:53	DD	A
Bromochloromethane	ND	ug/L		10.0	3.2	SW846 8260B			12/24/13 08:53	DD	A
Bromodichloromethane	ND	ug/L		10.0	2.7	SW846 8260B			12/24/13 08:53	DD	A
Bromoform	ND	ug/L	14	10.0	4.0	SW846 8260B			12/24/13 08:53	DD	A
Bromomethane	ND	ug/L		10.0	3.9	SW846 8260B			12/24/13 08:53	DD	A
2-Butanone	ND	ug/L		100	18.0	SW846 8260B			12/24/13 08:53	DD	A
tert-Butyl Alcohol	225	ug/L		100	22.0	SW846 8260B			12/24/13 08:53	DD	A
Carbon Disulfide	ND	ug/L		10.0	2.3	SW846 8260B			12/24/13 08:53	DD	A
Carbon Tetrachloride	ND	ug/L		10.0	3.1	SW846 8260B			12/24/13 08:53	DD	A
Chlorobenzene	ND	ug/L		10.0	1.9	SW846 8260B			12/24/13 08:53	DD	A
Chlorodibromomethane	ND	ug/L		10.0	4.5	SW846 8260B			12/24/13 08:53	DD	A
Chloroethane	ND	ug/L		10.0	3.3	SW846 8260B			12/24/13 08:53	DD	A
Chloroform	ND	ug/L		10.0	2.1	SW846 8260B			12/24/13 08:53	DD	A
Chloromethane	63.0	ug/L		10.0	3.1	SW846 8260B			12/24/13 08:53	DD	A
1,2-Dibromo-3-chloropropane	ND	ug/L		70.0	15.0	SW846 8260B			12/24/13 08:53	DD	A
1,2-Dibromoethane	ND	ug/L		10.0	2.8	SW846 8260B			12/24/13 08:53	DD	A
Dichlorodifluoromethane	ND	ug/L		10.0	3.3	SW846 8260B			12/24/13 08:53	DD	A
1,1-Dichloroethane	ND	ug/L		10.0	2.8	SW846 8260B			12/24/13 08:53	DD	A
1,2-Dichloroethane	ND	ug/L		10.0	3.2	SW846 8260B			12/24/13 08:53	DD	A
1,1-Dichloroethene	ND	ug/L		10.0	2.9	SW846 8260B			12/24/13 08:53	DD	A
cis-1,2-Dichloroethene	ND	ug/L		10.0	3.2	SW846 8260B			12/24/13 08:53	DD	A
trans-1,2-Dichloroethene	ND	ug/L		10.0	2.6	SW846 8260B			12/24/13 08:53	DD	A
Dichlorofluoromethane	ND	ug/L		10.0	3.7	SW846 8260B			12/24/13 08:53	DD	A
1,2-Dichloropropane	ND	ug/L		10.0	2.4	SW846 8260B			12/24/13 08:53	DD	A
cis-1,3-Dichloropropene	ND	ug/L		10.0	3.1	SW846 8260B			12/24/13 08:53	DD	A
trans-1,3-Dichloropropene	ND	ug/L		10.0	2.9	SW846 8260B			12/24/13 08:53	DD	A
Diisopropyl ether	138	ug/L		10.0	2.5	SW846 8260B			12/24/13 08:53	DD	A
Ethyl tert-butyl ether	ND	ug/L		10.0	1.9	SW846 8260B			12/24/13 08:53	DD	A
Ethylbenzene	ND	ug/L		10.0	3.4	SW846 8260B			12/24/13 08:53	DD	A
2-Hexanone	ND	ug/L		50.0	13.0	SW846 8260B			12/24/13 08:53	DD	A
Methyl t-Butyl Ether	83.2	ug/L		10.0	3.3	SW846 8260B			12/24/13 08:53	DD	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		50.0	15.0	SW846 8260B			12/24/13 08:53	DD	A
Methylene Chloride	ND	ug/L		10.0	4.5	SW846 8260B			12/24/13 08:53	DD	A
Styrene	ND	ug/L		10.0	2.4	SW846 8260B			12/24/13 08:53	DD	A
1,1,2,2-Tetrachloroethane	ND	ug/L		10.0	3.4	SW846 8260B			12/24/13 08:53	DD	A
Tetrachloroethene	ND	ug/L		10.0	3.5	SW846 8260B			12/24/13 08:53	DD	A

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ANALYTICAL RESULTS

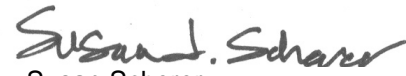
Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416012** Date Collected: 12/18/2013 12:20 Matrix: Ground Water
Sample ID: **MP-001_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene	725	ug/L		10.0	2.3	SW846 8260B			12/24/13 08:53	DD	A
Total Xylenes	145	ug/L		30.0	6.6	SW846 8260B			12/24/13 08:53	DD	A
1,1,1-Trichloroethane	ND	ug/L		10.0	2.2	SW846 8260B			12/24/13 08:53	DD	A
1,1,2-Trichloroethane	ND	ug/L		10.0	3.3	SW846 8260B			12/24/13 08:53	DD	A
Trichloroethene	ND	ug/L		10.0	3.3	SW846 8260B			12/24/13 08:53	DD	A
Vinyl Chloride	ND	ug/L		10.0	3.0	SW846 8260B			12/24/13 08:53	DD	A
o-Xylene	50.8	ug/L		10.0	3.3	SW846 8260B			12/24/13 08:53	DD	A
mp-Xylene	93.8	ug/L		20.0	5.2	SW846 8260B			12/24/13 08:53	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.2	%		62-133		SW846 8260B			12/24/13 08:53	DD	A
4-Bromofluorobenzene (S)	98.8	%		79-114		SW846 8260B			12/24/13 08:53	DD	A
Dibromofluoromethane (S)	80	%		78-116		SW846 8260B			12/24/13 08:53	DD	A
Toluene-d8 (S)	83.6	%		76-127		SW846 8260B			12/24/13 08:53	DD	A

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416013** Date Collected: 12/18/2013 11:50 Matrix: Ground Water
Sample ID: **MP-002_20131217_N** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		50.0	15.5	SW846 8260B	12/27/13 17:08	TMP			B
tert-Amyl methyl ether	ND	ug/L	5	5.0	1.0	SW846 8260B	12/27/13 17:08	TMP			B
tert-Amyl Alcohol	613	ug/L	6	50.0	33.0	SW846 8260B	12/27/13 17:08	TMP			B
tert-Amyl Ethylether	ND	ug/L	7	5.0	1.5	SW846 8260B	12/27/13 17:08	TMP			B
Benzene	220	ug/L		5.0	1.2	SW846 8260B	12/27/13 17:08	TMP			B
Bromochloromethane	ND	ug/L		5.0	1.6	SW846 8260B	12/27/13 17:08	TMP			B
Bromodichloromethane	ND	ug/L	8	5.0	1.4	SW846 8260B	12/27/13 17:08	TMP			B
Bromoform	ND	ug/L	9	5.0	2.0	SW846 8260B	12/27/13 17:08	TMP			B
Bromomethane	ND	ug/L		5.0	2.0	SW846 8260B	12/27/13 17:08	TMP			B
2-Butanone	ND	ug/L		50.0	9.0	SW846 8260B	12/27/13 17:08	TMP			B
tert-Butyl Alcohol	159	ug/L		50.0	11.0	SW846 8260B	12/27/13 17:08	TMP			B
Carbon Disulfide	ND	ug/L		5.0	1.2	SW846 8260B	12/27/13 17:08	TMP			B
Carbon Tetrachloride	ND	ug/L		5.0	1.6	SW846 8260B	12/27/13 17:08	TMP			B
Chlorobenzene	ND	ug/L		5.0	0.95	SW846 8260B	12/27/13 17:08	TMP			B
Chlorodibromomethane	ND	ug/L	10	5.0	2.3	SW846 8260B	12/27/13 17:08	TMP			B
Chloroethane	ND	ug/L		5.0	1.7	SW846 8260B	12/27/13 17:08	TMP			B
Chloroform	ND	ug/L		5.0	1.1	SW846 8260B	12/27/13 17:08	TMP			B
Chloromethane	ND	ug/L		5.0	1.6	SW846 8260B	12/27/13 17:08	TMP			B
1,2-Dibromo-3-chloropropane	ND	ug/L		35.0	7.5	SW846 8260B	12/27/13 17:08	TMP			B
1,2-Dibromoethane	ND	ug/L		5.0	1.4	SW846 8260B	12/27/13 17:08	TMP			B
Dichlorodifluoromethane	ND	ug/L		5.0	1.7	SW846 8260B	12/27/13 17:08	TMP			B
1,1-Dichloroethane	ND	ug/L		5.0	1.4	SW846 8260B	12/27/13 17:08	TMP			B
1,2-Dichloroethane	ND	ug/L		5.0	1.6	SW846 8260B	12/27/13 17:08	TMP			B
1,1-Dichloroethene	ND	ug/L		5.0	1.5	SW846 8260B	12/27/13 17:08	TMP			B
cis-1,2-Dichloroethene	ND	ug/L		5.0	1.6	SW846 8260B	12/27/13 17:08	TMP			B
trans-1,2-Dichloroethene	ND	ug/L		5.0	1.3	SW846 8260B	12/27/13 17:08	TMP			B
Dichlorofluoromethane	ND	ug/L		5.0	1.9	SW846 8260B	12/27/13 17:08	TMP			B
1,2-Dichloropropane	ND	ug/L		5.0	1.2	SW846 8260B	12/27/13 17:08	TMP			B
cis-1,3-Dichloropropene	ND	ug/L	11	5.0	1.6	SW846 8260B	12/27/13 17:08	TMP			B
trans-1,3-Dichloropropene	ND	ug/L	12	5.0	1.5	SW846 8260B	12/27/13 17:08	TMP			B
Diisopropyl ether	68.2	ug/L		5.0	1.3	SW846 8260B	12/27/13 17:08	TMP			B
Ethyl tert-butyl ether	ND	ug/L		5.0	0.95	SW846 8260B	12/27/13 17:08	TMP			B
Ethylbenzene	ND	ug/L		5.0	1.7	SW846 8260B	12/27/13 17:08	TMP			B
2-Hexanone	ND	ug/L		25.0	6.5	SW846 8260B	12/27/13 17:08	TMP			B
Methyl t-Butyl Ether	32.6	ug/L		5.0	1.7	SW846 8260B	12/27/13 17:08	TMP			B
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		25.0	7.5	SW846 8260B	12/27/13 17:08	TMP			B
Methylene Chloride	ND	ug/L		5.0	2.3	SW846 8260B	12/27/13 17:08	TMP			B
Styrene	ND	ug/L		5.0	1.2	SW846 8260B	12/27/13 17:08	TMP			B
1,1,2,2-Tetrachloroethane	ND	ug/L		5.0	1.7	SW846 8260B	12/27/13 17:08	TMP			B
Tetrachloroethene	ND	ug/L		5.0	1.8	SW846 8260B	12/27/13 17:08	TMP			B

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416014** Date Collected: 12/17/2013 00:00 Matrix: Ground Water
Sample ID: **DUP-001_20131217_D** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	ND	ug/L		50.0	15.5	SW846 8260B			12/27/13 07:26	DD	A
tert-Amyl methyl ether	ND	ug/L		5.0	1.0	SW846 8260B			12/27/13 07:26	DD	A
tert-Amyl Alcohol	1360	ug/L	1	50.0	33.0	SW846 8260B			12/27/13 07:26	DD	A
tert-Amyl Ethylether	ND	ug/L		5.0	1.5	SW846 8260B			12/27/13 07:26	DD	A
Benzene	19.4	ug/L		5.0	1.2	SW846 8260B			12/27/13 07:26	DD	A
Bromochloromethane	ND	ug/L		5.0	1.6	SW846 8260B			12/27/13 07:26	DD	A
Bromodichloromethane	ND	ug/L		5.0	1.4	SW846 8260B			12/27/13 07:26	DD	A
Bromoform	ND	ug/L	2	5.0	2.0	SW846 8260B			12/27/13 07:26	DD	A
Bromomethane	ND	ug/L		5.0	2.0	SW846 8260B			12/27/13 07:26	DD	A
2-Butanone	ND	ug/L		50.0	9.0	SW846 8260B			12/27/13 07:26	DD	A
tert-Butyl Alcohol	869	ug/L		50.0	11.0	SW846 8260B			12/27/13 07:26	DD	A
Carbon Disulfide	ND	ug/L		5.0	1.2	SW846 8260B			12/27/13 07:26	DD	A
Carbon Tetrachloride	ND	ug/L		5.0	1.6	SW846 8260B			12/27/13 07:26	DD	A
Chlorobenzene	ND	ug/L		5.0	0.95	SW846 8260B			12/27/13 07:26	DD	A
Chlorodibromomethane	ND	ug/L	3	5.0	2.3	SW846 8260B			12/27/13 07:26	DD	A
Chloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/27/13 07:26	DD	A
Chloroform	ND	ug/L		5.0	1.1	SW846 8260B			12/27/13 07:26	DD	A
Chloromethane	ND	ug/L		5.0	1.6	SW846 8260B			12/27/13 07:26	DD	A
1,2-Dibromo-3-chloropropane	ND	ug/L		35.0	7.5	SW846 8260B			12/27/13 07:26	DD	A
1,2-Dibromoethane	ND	ug/L		5.0	1.4	SW846 8260B			12/27/13 07:26	DD	A
Dichlorodifluoromethane	ND	ug/L		5.0	1.7	SW846 8260B			12/27/13 07:26	DD	A
1,1-Dichloroethane	ND	ug/L		5.0	1.4	SW846 8260B			12/27/13 07:26	DD	A
1,2-Dichloroethane	108	ug/L		5.0	1.6	SW846 8260B			12/27/13 07:26	DD	A
1,1-Dichloroethene	ND	ug/L		5.0	1.5	SW846 8260B			12/27/13 07:26	DD	A
cis-1,2-Dichloroethene	ND	ug/L		5.0	1.6	SW846 8260B			12/27/13 07:26	DD	A
trans-1,2-Dichloroethene	ND	ug/L		5.0	1.3	SW846 8260B			12/27/13 07:26	DD	A
Dichlorofluoromethane	ND	ug/L		5.0	1.9	SW846 8260B			12/27/13 07:26	DD	A
1,2-Dichloropropane	ND	ug/L		5.0	1.2	SW846 8260B			12/27/13 07:26	DD	A
cis-1,3-Dichloropropene	ND	ug/L	4	5.0	1.6	SW846 8260B			12/27/13 07:26	DD	A
trans-1,3-Dichloropropene	ND	ug/L		5.0	1.5	SW846 8260B			12/27/13 07:26	DD	A
Diisopropyl ether	24.1	ug/L		5.0	1.3	SW846 8260B			12/27/13 07:26	DD	A
Ethyl tert-butyl ether	ND	ug/L		5.0	0.95	SW846 8260B			12/27/13 07:26	DD	A
Ethylbenzene	ND	ug/L		5.0	1.7	SW846 8260B			12/27/13 07:26	DD	A
2-Hexanone	ND	ug/L		25.0	6.5	SW846 8260B			12/27/13 07:26	DD	A
Methyl t-Butyl Ether	76.9	ug/L		5.0	1.7	SW846 8260B			12/27/13 07:26	DD	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L		25.0	7.5	SW846 8260B			12/27/13 07:26	DD	A
Methylene Chloride	ND	ug/L		5.0	2.3	SW846 8260B			12/27/13 07:26	DD	A
Styrene	ND	ug/L		5.0	1.2	SW846 8260B			12/27/13 07:26	DD	A
1,1,2,2-Tetrachloroethane	ND	ug/L		5.0	1.7	SW846 8260B			12/27/13 07:26	DD	A
Tetrachloroethene	ND	ug/L		5.0	1.8	SW846 8260B			12/27/13 07:26	DD	A

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416015** Date Collected: 12/17/2013 12:12 Matrix: Ground Water
Sample ID: **Field Blank-001_20131217_FB** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	ND	ug/L		10.0	3.1	SW846 8260B		12/24/13 06:14	GLQ	A
tert-Amyl methyl ether	ND	ug/L		1.0	0.20	SW846 8260B		12/24/13 06:14	GLQ	A
tert-Amyl Alcohol	ND	ug/L	18	10.0	6.6	SW846 8260B		12/24/13 06:14	GLQ	A
tert-Amyl Ethylether	ND	ug/L		1.0	0.29	SW846 8260B		12/24/13 06:14	GLQ	A
Benzene	ND	ug/L		1.0	0.23	SW846 8260B		12/24/13 06:14	GLQ	A
Bromochloromethane	ND	ug/L		1.0	0.32	SW846 8260B		12/24/13 06:14	GLQ	A
Bromodichloromethane	ND	ug/L		1.0	0.27	SW846 8260B		12/24/13 06:14	GLQ	A
Bromoform	ND	ug/L		1.0	0.40	SW846 8260B		12/24/13 06:14	GLQ	A
Bromomethane	0.69J	ug/L		1.0	0.39	SW846 8260B		12/24/13 06:14	GLQ	A
2-Butanone	ND	ug/L	19	10.0	1.8	SW846 8260B		12/24/13 06:14	GLQ	A
tert-Butyl Alcohol	ND	ug/L		10.0	2.2	SW846 8260B		12/24/13 06:14	GLQ	A
Carbon Disulfide	ND	ug/L		1.0	0.23	SW846 8260B		12/24/13 06:14	GLQ	A
Carbon Tetrachloride	ND	ug/L		1.0	0.31	SW846 8260B		12/24/13 06:14	GLQ	A
Chlorobenzene	ND	ug/L		1.0	0.19	SW846 8260B		12/24/13 06:14	GLQ	A
Chlorodibromomethane	ND	ug/L		1.0	0.45	SW846 8260B		12/24/13 06:14	GLQ	A
Chloroethane	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:14	GLQ	A
Chloroform	ND	ug/L		1.0	0.21	SW846 8260B		12/24/13 06:14	GLQ	A
Chloromethane	0.57J	ug/L		1.0	0.31	SW846 8260B		12/24/13 06:14	GLQ	A
1,2-Dibromo-3-chloropropane	ND	ug/L		7.0	1.5	SW846 8260B		12/24/13 06:14	GLQ	A
1,2-Dibromoethane	ND	ug/L		1.0	0.28	SW846 8260B		12/24/13 06:14	GLQ	A
Dichlorodifluoromethane	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:14	GLQ	A
1,1-Dichloroethane	ND	ug/L		1.0	0.28	SW846 8260B		12/24/13 06:14	GLQ	A
1,2-Dichloroethane	ND	ug/L		1.0	0.32	SW846 8260B		12/24/13 06:14	GLQ	A
1,1-Dichloroethene	ND	ug/L		1.0	0.29	SW846 8260B		12/24/13 06:14	GLQ	A
cis-1,2-Dichloroethene	ND	ug/L		1.0	0.32	SW846 8260B		12/24/13 06:14	GLQ	A
trans-1,2-Dichloroethene	ND	ug/L		1.0	0.26	SW846 8260B		12/24/13 06:14	GLQ	A
Dichlorofluoromethane	ND	ug/L		1.0	0.37	SW846 8260B		12/24/13 06:14	GLQ	A
1,2-Dichloropropane	ND	ug/L		1.0	0.24	SW846 8260B		12/24/13 06:14	GLQ	A
cis-1,3-Dichloropropene	ND	ug/L		1.0	0.31	SW846 8260B		12/24/13 06:14	GLQ	A
trans-1,3-Dichloropropene	ND	ug/L		1.0	0.29	SW846 8260B		12/24/13 06:14	GLQ	A
Diisopropyl ether	ND	ug/L		1.0	0.25	SW846 8260B		12/24/13 06:14	GLQ	A
Ethyl tert-butyl ether	ND	ug/L		1.0	0.19	SW846 8260B		12/24/13 06:14	GLQ	A
Ethylbenzene	ND	ug/L		1.0	0.34	SW846 8260B		12/24/13 06:14	GLQ	A
2-Hexanone	ND	ug/L	20	5.0	1.3	SW846 8260B		12/24/13 06:14	GLQ	A
Methyl t-Butyl Ether	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:14	GLQ	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	21	5.0	1.5	SW846 8260B		12/24/13 06:14	GLQ	A
Methylene Chloride	ND	ug/L		1.0	0.45	SW846 8260B		12/24/13 06:14	GLQ	A
Styrene	ND	ug/L		1.0	0.24	SW846 8260B		12/24/13 06:14	GLQ	A
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0	0.34	SW846 8260B		12/24/13 06:14	GLQ	A
Tetrachloroethene	ND	ug/L		1.0	0.35	SW846 8260B		12/24/13 06:14	GLQ	A

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

 Lab ID: **1064416016** Date Collected: 12/18/2013 12:24 Matrix: Ground Water
 Sample ID: **Field Blank-002_20131218_FB** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	38.0	ug/L		10.0	3.1	SW846 8260B		12/24/13 06:37	GLQ	A
tert-Amyl methyl ether	ND	ug/L		1.0	0.20	SW846 8260B		12/24/13 06:37	GLQ	A
tert-Amyl Alcohol	ND	ug/L	18	10.0	6.6	SW846 8260B		12/24/13 06:37	GLQ	A
tert-Amyl Ethylether	ND	ug/L		1.0	0.29	SW846 8260B		12/24/13 06:37	GLQ	A
Benzene	ND	ug/L		1.0	0.23	SW846 8260B		12/24/13 06:37	GLQ	A
Bromochloromethane	ND	ug/L		1.0	0.32	SW846 8260B		12/24/13 06:37	GLQ	A
Bromodichloromethane	ND	ug/L		1.0	0.27	SW846 8260B		12/24/13 06:37	GLQ	A
Bromoform	ND	ug/L		1.0	0.40	SW846 8260B		12/24/13 06:37	GLQ	A
Bromomethane	ND	ug/L		1.0	0.39	SW846 8260B		12/24/13 06:37	GLQ	A
2-Butanone	ND	ug/L	19	10.0	1.8	SW846 8260B		12/24/13 06:37	GLQ	A
tert-Butyl Alcohol	ND	ug/L		10.0	2.2	SW846 8260B		12/24/13 06:37	GLQ	A
Carbon Disulfide	ND	ug/L		1.0	0.23	SW846 8260B		12/24/13 06:37	GLQ	A
Carbon Tetrachloride	ND	ug/L		1.0	0.31	SW846 8260B		12/24/13 06:37	GLQ	A
Chlorobenzene	ND	ug/L		1.0	0.19	SW846 8260B		12/24/13 06:37	GLQ	A
Chlorodibromomethane	ND	ug/L		1.0	0.45	SW846 8260B		12/24/13 06:37	GLQ	A
Chloroethane	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:37	GLQ	A
Chloroform	ND	ug/L		1.0	0.21	SW846 8260B		12/24/13 06:37	GLQ	A
Chloromethane	ND	ug/L		1.0	0.31	SW846 8260B		12/24/13 06:37	GLQ	A
1,2-Dibromo-3-chloropropane	ND	ug/L		7.0	1.5	SW846 8260B		12/24/13 06:37	GLQ	A
1,2-Dibromoethane	ND	ug/L		1.0	0.28	SW846 8260B		12/24/13 06:37	GLQ	A
Dichlorodifluoromethane	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:37	GLQ	A
1,1-Dichloroethane	ND	ug/L		1.0	0.28	SW846 8260B		12/24/13 06:37	GLQ	A
1,2-Dichloroethane	ND	ug/L		1.0	0.32	SW846 8260B		12/24/13 06:37	GLQ	A
1,1-Dichloroethene	ND	ug/L		1.0	0.29	SW846 8260B		12/24/13 06:37	GLQ	A
cis-1,2-Dichloroethene	ND	ug/L		1.0	0.32	SW846 8260B		12/24/13 06:37	GLQ	A
trans-1,2-Dichloroethene	ND	ug/L		1.0	0.26	SW846 8260B		12/24/13 06:37	GLQ	A
Dichlorofluoromethane	ND	ug/L		1.0	0.37	SW846 8260B		12/24/13 06:37	GLQ	A
1,2-Dichloropropane	ND	ug/L		1.0	0.24	SW846 8260B		12/24/13 06:37	GLQ	A
cis-1,3-Dichloropropene	ND	ug/L		1.0	0.31	SW846 8260B		12/24/13 06:37	GLQ	A
trans-1,3-Dichloropropene	ND	ug/L		1.0	0.29	SW846 8260B		12/24/13 06:37	GLQ	A
Diisopropyl ether	ND	ug/L		1.0	0.25	SW846 8260B		12/24/13 06:37	GLQ	A
Ethyl tert-butyl ether	ND	ug/L		1.0	0.19	SW846 8260B		12/24/13 06:37	GLQ	A
Ethylbenzene	ND	ug/L		1.0	0.34	SW846 8260B		12/24/13 06:37	GLQ	A
2-Hexanone	ND	ug/L	20	5.0	1.3	SW846 8260B		12/24/13 06:37	GLQ	A
Methyl t-Butyl Ether	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:37	GLQ	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	21	5.0	1.5	SW846 8260B		12/24/13 06:37	GLQ	A
Methylene Chloride	ND	ug/L		1.0	0.45	SW846 8260B		12/24/13 06:37	GLQ	A
Styrene	ND	ug/L		1.0	0.24	SW846 8260B		12/24/13 06:37	GLQ	A
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0	0.34	SW846 8260B		12/24/13 06:37	GLQ	A
Tetrachloroethene	ND	ug/L		1.0	0.35	SW846 8260B		12/24/13 06:37	GLQ	A

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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416017** Date Collected: 12/17/2013 00:00 Matrix: Ground Water
Sample ID: **Trip Blank_20131217_TB** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	30.3	ug/L		10.0	3.1	SW846 8260B		12/24/13 06:59	GLQ	A
tert-Amyl methyl ether	ND	ug/L		1.0	0.20	SW846 8260B		12/24/13 06:59	GLQ	A
tert-Amyl Alcohol	ND	ug/L	18	10.0	6.6	SW846 8260B		12/24/13 06:59	GLQ	A
tert-Amyl Ethylether	ND	ug/L		1.0	0.29	SW846 8260B		12/24/13 06:59	GLQ	A
Benzene	ND	ug/L		1.0	0.23	SW846 8260B		12/24/13 06:59	GLQ	A
Bromochloromethane	ND	ug/L		1.0	0.32	SW846 8260B		12/24/13 06:59	GLQ	A
Bromodichloromethane	ND	ug/L		1.0	0.27	SW846 8260B		12/24/13 06:59	GLQ	A
Bromoform	ND	ug/L		1.0	0.40	SW846 8260B		12/24/13 06:59	GLQ	A
Bromomethane	ND	ug/L		1.0	0.39	SW846 8260B		12/24/13 06:59	GLQ	A
2-Butanone	ND	ug/L	19	10.0	1.8	SW846 8260B		12/24/13 06:59	GLQ	A
tert-Butyl Alcohol	ND	ug/L		10.0	2.2	SW846 8260B		12/24/13 06:59	GLQ	A
Carbon Disulfide	ND	ug/L		1.0	0.23	SW846 8260B		12/24/13 06:59	GLQ	A
Carbon Tetrachloride	ND	ug/L		1.0	0.31	SW846 8260B		12/24/13 06:59	GLQ	A
Chlorobenzene	ND	ug/L		1.0	0.19	SW846 8260B		12/24/13 06:59	GLQ	A
Chlorodibromomethane	ND	ug/L		1.0	0.45	SW846 8260B		12/24/13 06:59	GLQ	A
Chloroethane	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:59	GLQ	A
Chloroform	ND	ug/L		1.0	0.21	SW846 8260B		12/24/13 06:59	GLQ	A
Chloromethane	ND	ug/L		1.0	0.31	SW846 8260B		12/24/13 06:59	GLQ	A
1,2-Dibromo-3-chloropropane	ND	ug/L		7.0	1.5	SW846 8260B		12/24/13 06:59	GLQ	A
1,2-Dibromoethane	ND	ug/L		1.0	0.28	SW846 8260B		12/24/13 06:59	GLQ	A
Dichlorodifluoromethane	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:59	GLQ	A
1,1-Dichloroethane	ND	ug/L		1.0	0.28	SW846 8260B		12/24/13 06:59	GLQ	A
1,2-Dichloroethane	ND	ug/L		1.0	0.32	SW846 8260B		12/24/13 06:59	GLQ	A
1,1-Dichloroethene	ND	ug/L		1.0	0.29	SW846 8260B		12/24/13 06:59	GLQ	A
cis-1,2-Dichloroethene	ND	ug/L		1.0	0.32	SW846 8260B		12/24/13 06:59	GLQ	A
trans-1,2-Dichloroethene	ND	ug/L		1.0	0.26	SW846 8260B		12/24/13 06:59	GLQ	A
Dichlorofluoromethane	ND	ug/L		1.0	0.37	SW846 8260B		12/24/13 06:59	GLQ	A
1,2-Dichloropropane	ND	ug/L		1.0	0.24	SW846 8260B		12/24/13 06:59	GLQ	A
cis-1,3-Dichloropropene	ND	ug/L		1.0	0.31	SW846 8260B		12/24/13 06:59	GLQ	A
trans-1,3-Dichloropropene	ND	ug/L		1.0	0.29	SW846 8260B		12/24/13 06:59	GLQ	A
Diisopropyl ether	ND	ug/L		1.0	0.25	SW846 8260B		12/24/13 06:59	GLQ	A
Ethyl tert-butyl ether	ND	ug/L		1.0	0.19	SW846 8260B		12/24/13 06:59	GLQ	A
Ethylbenzene	ND	ug/L		1.0	0.34	SW846 8260B		12/24/13 06:59	GLQ	A
2-Hexanone	ND	ug/L	20	5.0	1.3	SW846 8260B		12/24/13 06:59	GLQ	A
Methyl t-Butyl Ether	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:59	GLQ	A
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	21	5.0	1.5	SW846 8260B		12/24/13 06:59	GLQ	A
Methylene Chloride	ND	ug/L		1.0	0.45	SW846 8260B		12/24/13 06:59	GLQ	A
Styrene	ND	ug/L		1.0	0.24	SW846 8260B		12/24/13 06:59	GLQ	A
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0	0.34	SW846 8260B		12/24/13 06:59	GLQ	A
Tetrachloroethene	ND	ug/L		1.0	0.35	SW846 8260B		12/24/13 06:59	GLQ	A

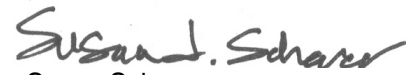
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ANALYTICAL RESULTS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

Lab ID: **1064416017** Date Collected: 12/17/2013 00:00 Matrix: Ground Water
Sample ID: **Trip Blank_20131217_TB** Date Received: 12/19/2013 22:40

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Toluene	ND	ug/L		1.0	0.23	SW846 8260B		12/24/13 06:59	GLQ	A
Total Xylenes	ND	ug/L		3.0	0.66	SW846 8260B		12/24/13 06:59	GLQ	A
1,1,1-Trichloroethane	ND	ug/L		1.0	0.22	SW846 8260B		12/24/13 06:59	GLQ	A
1,1,2-Trichloroethane	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:59	GLQ	A
Trichloroethene	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:59	GLQ	A
Vinyl Chloride	ND	ug/L		1.0	0.30	SW846 8260B		12/24/13 06:59	GLQ	A
o-Xylene	ND	ug/L		1.0	0.33	SW846 8260B		12/24/13 06:59	GLQ	A
mp-Xylene	ND	ug/L		2.0	0.52	SW846 8260B		12/24/13 06:59	GLQ	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Units</i>	<i>Footnotes</i>	<i>Limits</i>		<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	101	%		62-133		SW846 8260B		12/24/13 06:59	GLQ	A
4-Bromofluorobenzene (S)	99.2	%		79-114		SW846 8260B		12/24/13 06:59	GLQ	A
Dibromofluoromethane (S)	99.8	%		78-116		SW846 8260B		12/24/13 06:59	GLQ	A
Toluene-d8 (S)	94.5	%		76-127		SW846 8260B		12/24/13 06:59	GLQ	A

Sample Comments:


Susan Scherer
Project Coordinator

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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

PARAMETER QUALIFIERS\FLAGS

- [1] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte tert-Amyl Alcohol. The % Recovery was reported as 52.8 and the control limits were 70 to 130.
- [2] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Bromoform. The % Recovery was reported as 61.3 and the control limits were 70 to 123.
- [3] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Chlorodibromomethane. The % Recovery was reported as 72.7 and the control limits were 77 to 122.
- [4] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 79 and the control limits were 81 to 121.
- [5] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte tert-Amyl methyl ether. The % Recovery was reported as 69.6 and the control limits were 75 to 121.
- [6] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte tert-Amyl Alcohol. The % Recovery was reported as 46.1 and the control limits were 70 to 130.
- [7] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte tert-Amyl Ethylether. The % Recovery was reported as 68.7 and the control limits were 70 to 130.
- [8] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Bromodichloromethane. The % Recovery was reported as 74.6 and the control limits were 79 to 126.
- [9] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Bromoform. The % Recovery was reported as 56.8 and the control limits were 70 to 123.
- [10] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Chlorodibromomethane. The % Recovery was reported as 65 and the control limits were 77 to 122.
- [11] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 71.2 and the control limits were 81 to 121.
- [12] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte trans-1,3-Dichloropropene. The % Recovery was reported as 74.5 and the control limits were 78 to 126.
- [13] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte tert-Amyl Alcohol. The % Recovery was reported as 55.1 and the control limits were 70 to 130.
- [14] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Bromoform. The % Recovery was reported as 69.7 and the control limits were 70 to 123.
- [15] The surrogate Dibromofluoromethane for method SW846 8260B was outside of control limits. The % Recovery was reported as 74.9 and the control limits were 78 to 116. This result was reported at a dilution of 5.
- [16] The surrogate Dibromofluoromethane for method SW846 8260B was outside of control limits. The % Recovery was reported as 77.1 and the control limits were 78 to 116. This result was reported at a dilution of 5.

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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 1064416 2013-CALVERT CITGO PROJECT/597

PARAMETER QUALIFIERS\FLAGS

- [17] The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 116 and the control limits were 79 to 114. This result was reported at a dilution of 1.
- [18] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte tert-Amyl Alcohol. The % Recovery was reported as 59 and the control limits were 70 to 130.
- [19] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 2-Butanone. The % Recovery was reported as 32.6 and the control limits were 50 to 152.
- [20] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 59.6 and the control limits were 65 to 154.
- [21] The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 4-Methyl-2-Pentanone(MIBK). The % Recovery was reported as 55.6 and the control limits were 71 to 146.

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**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 3
 Counter: _____
 Tracking #: _____

Co. Name: REPSO, Inc.
Contact (Report to): jmunuel@reps.com Phone: 215-784-3410
Address: James Mandel
 6901 Kingsessing Ave
 Philadelphia, PA 19142

Bill to (if different than Report to): Same
PO#: 8834

Project Name#: Calvert City 15977 **ALSI Quote #:** _____
TAT: Normal-Standard TAT is 10-12 business days. 5 day
 Rush-Subject to ALSI approval and surcharges.

Email? jmunuel@reps.com / bmunuel@reps.com
Fax? No. 215-784-1587

Sample Description/Location <small>(as it will appear on the lab report)</small>	COC Comments	Sample Date	Military Time	Matrix	Enter Number of Containers Per Analysis
1 MW-001		12/17/13	1330	6 MW	3
2 MW-002		12/17/13	1400	6 MW	3
3 MW-003		12/17/13	1500	6 MW	3
4 MW-003		12/17/13	1600	6 MW	3
5 MW-003R		12/17/13	1630	6 MW	3
6 MW-005		12/17/13	1700	6 MW	3
7 MW-005R		12/17/13	1730	6 MW	3
8 MW-006		12/17/13	1800	6 MW	3

SAMPLED BY (Please Print): Gersh Munosky
LOGGED BY (Signature): _____
REVIEWED BY (Signature): _____

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
Gersh Munosky	12/19	14:50	Don Hoopes	12/19	14:50
Don Hoopes	12/19	22:40	SHSSTP	12/19	22:40

ANALYSES/METHOD REQUESTED

State Samples Collected In? MD NJ NY PA

SWM Form? Standard CLP-like NJ-Reduced NJ-Full

State Criteria Required? YES NO

EQMS YES NO

GOOD Criteria Required? YES NO

ALS FIELD SERVICES

Pickup Labor Composite Sampling Rental Equipment Other

Notes:

Therm. ID: TH-210

No. of Coolers: _____

Correct containers? Y N

Correct sample volumes? Y N

Received on ice? Y N

COC labels complete/accurate? Y N

Container in good condition? Y N

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY
 * G-Grab; C-Composite
 **Matrix: Ab-Air; DW=Drinking Water; GW=Groundwater; Oil-Oil; OL=Other Liquid; SL=Sludge; SC=Soil; WP=Wipes; WW=Wastewater
 ***Container Type: AG-Amber Glass; CG-Clear Glass; PL-Plastic. Container Size: 250ml, 500ml, 1L, 5oz., etc. Preservative: HCl, HNO3, NaOH, etc.

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Analytical Laboratory Services, Inc.
 Environmental • Industrial Hygiene • Field Services
 34 Dogwood Lane • Middletown, PA 17057 • 717-944-5541 • Fax: 717-944-1430

Co. Name: REPSO, Inc.
Contact (Report to): James Manuel
Address:
 Godol Kingessing Ave
 Philadelphia, PA 19144

Phone: 215-784-3800
PO#: 8834

Project Name#: Calvert City/5977
ALSI Quote #:

TAT: Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALSI approval and surcharges.

Email? jmanuale@psg.com
Fax? No.

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS
 ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Container Type: No A
Container Size: 40ml
Preservative: HCL

Matrix: VOCs By SGC/B
 Including Fuel Oxygenates

Sample Date: 12/19/13
Military Time: 6:01Z

Sample Location: Top Bunk - 001

COC Comments:

Receipt Information
 (Completed by Sample Provider)
Received by: SAMS
Cooler Temp: 1
Therm. ID: 11-215
No. of Coolers:

Notes:

Correct containers?	Y	Correct sample volume?	Y	Correct preservation?	Y	CO/Labels complete/accurate?	Y	Container in good condition?	Y
Headspace/Volatiles?	Y	Received on ice?	Y	Seals intact?	Y	Custody seals Present?	Y		

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis	1	2	3	4	5	6	7	8

LOGGED BY (Signature): [Signature] DATE: 12/19/13

REVIEWED BY (Signature): [Signature] DATE: 12/19/13

Date	Time	Received By / Company Name	Date	Time
12/19	14:50	PLG 309967	12/19	14:15
12/19		PLG 309967	12/19	20:10
12/19	22:40	SAMS HP	12/19	22:40

ALS FIELD SERVICES

Pickup
 Labor
 Composite Sampling
 Rental Equipment
 Other:

Copies: WHITE - ORIGINAL, CANARY - CUSTOMER COPY
 * G-Grab; C-Composite
 **Matrix: A=Air; DW=Drinking Water; GW=Groundwater; Oil/Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wet; WW=Wastewater
 ***Container Type: AG=Amber Glass; CG=Clear Glass; PL=Plastic. Container Size: 250ml, 500ml, 1L, 5oz., etc. Preservative: HCl, HNO3, NaOH, etc.

ALS Environmental Laboratory Locations Across North America

- Canada: Burlington • Calgary • Centre of Excellence • Edmonton • Fort McMurray • Fort St. John • Grande Prairie • London • Mississauga • Richmond Hill • Saskatoon • Thunder Bay
 Vancouver Waterloo • Winnipeg • Yellowknife United States: Cincinnati • Everett • Fort Collins • Holland • Houston • Middletown • Salt Lake City • Spring City • York Mexico: Monterrey