March 10, 2016

Brenna McDonald
Missouri Geological Survey
111 Fairgrounds Road
Rolla, MO 65401
TEL: (573) 368-2163
FAX:

RE: Appendix I & II **WorkOrder:** 16030376

Dear Brenna McDonald:

TEKLAB, INC received 2 samples on 3/4/2016 4:00:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Emily E. Pohlman
Project Manager
(618)344-1004 ex 44
epohlman@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030376
Report Date: 10-Mar-16

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Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

Abbr Definition

CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
DNI	Did not ignite
DUP	Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Qualifiers

# -	Unknown hydrocarbon	B -	Analyte detected in associated Method Blank
E -	Value above quantitation range	H -	Holding times exceeded
I -	Associated internal standard was outside method criteria	J -	Analyte detected below quantitation limits
M -	Manual Integration used to determine area response	ND -	Not Detected at the Reporting Limit
R -	RPD outside accepted recovery limits	S -	Spike Recovery outside recovery limits
T -	TIC(Tentatively identified compound)	X -	Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030376
Report Date: 10-Mar-16

Cooler Receipt Temp: 5.22 °C

Locations and Accreditations

	Collinsville	Springfield	Kansas City	Collinsville Air
Address	5445 Horseshoe Lake Road	3920 Pintail Dr	8421 Nieman Road	5445 Horseshoe Lake Road
	Collinsville, IL 62234-7425	Springfield, IL 62711-9415	Lenexa, KS 66214	Collinsville, IL 62234-7425
Phone	(618) 344-1004	(217) 698-1004	(913) 541-1998	(618) 344-1004
Fax	(618) 344-1005	(217) 698-1005	(913) 541-1998	(618) 344-1005
Email	jhriley@teklabinc.com	KKlostermann@teklabinc.com	dthompson@teklabinc.com	EHurley@teklabinc.com

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2017	Collinsville
Kansas	KDHE	E-10374	NELAP	5/31/2016	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2016	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2016	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2016	Collinsville
Arkansas	ADEQ	88-0966		3/14/2017	Collinsville
Illinois	IDPH	17584		5/31/2017	Collinsville
Kentucky	KDEP	98006		12/31/2016	Collinsville
Kentucky	UST	0073		1/31/2017	Collinsville
Missouri	MDNR	00930		5/31/2017	Collinsville
Oklahoma	ODEQ	9978		8/31/2016	Collinsville

Laboratory Results

http://www.teklabinc.com/

Client: Missouri Geological Survey
Work Order: 16030376
Client Project: Appendix I & II
Report Date: 10-Mar-16
Lab ID: 16030376-001
Client Sample ID: PZ-116-SS
Matrix: GROUNDWATER
Collection Date: 03/03/2016 14:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**38**	mg/L	1	03/07/2016 15:22	R215700
SW-846 9060								
Total Organic Carbon (TOC)	NELAP	1.0	J	**0.8**	mg/L	1	03/07/2016 15:14	R215672
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	03/08/2016 21:11	116932
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	03/08/2016 21:11	116932
Barium	NELAP	0.0025		**0.0797**	mg/L	1	03/08/2016 21:11	116932
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	03/08/2016 21:11	116932
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	03/08/2016 21:11	116932
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	03/08/2016 21:11	116932
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	03/08/2016 21:11	116932
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	03/08/2016 21:11	116932
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	03/08/2016 21:11	116932
Magnesium	NELAP	0.0500	S	**32.7**	mg/L	1	03/08/2016 21:11	116932
Manganese	NELAP	0.0030		**0.0120**	mg/L	1	03/08/2016 21:11	116932
Nickel	NELAP	0.0050		**< 0.0050**	mg/L	1	03/08/2016 21:11	116932
Selenium	NELAP	0.0400		**< 0.0400**	mg/L	1	03/08/2016 21:11	116932
Silver	NELAP	0.0050		**< 0.0050**	mg/L	1	03/08/2016 21:11	116932
Thallium	NELAP	0.0500		**< 0.0500**	mg/L	1	03/08/2016 21:11	116932
Tin	NELAP	0.0200		**< 0.0200**	mg/L	1	03/08/2016 21:11	116932
Vanadium	NELAP	0.0100	J	**0.0015**	mg/L	1	03/08/2016 21:11	116932
Zinc	NELAP	0.0100	J	**0.0075**	mg/L	1	03/08/2016 21:11	116932
MS QC limits for Mg are not applicable due to high sample/spike ratio.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	03/08/2016 13:55	116938
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,4-Trichlorobenzene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
2,4,5-Trichlorophenol	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
2,4,6-Trichlorophenol	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
2,4-Dichlorophenol	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
2,4-Dimethylphenol	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
2,4-Dinitrophenol	NELAP	0.020		**ND**	mg/L	1	03/08/2016 8:45	116867
2,4-Dinitrotoluene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
2,6-Dinitrotoluene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
2-Chloronaphthalene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
2-Chlorophenol	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
2-Methylnaphthalene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
2-Nitroaniline	NELAP	0.040		**ND**	mg/L	1	03/08/2016 8:45	116867
2-Nitrophenol	NELAP	0.020		**ND**	mg/L	1	03/08/2016 8:45	116867
3,3´-Dichlorobenzidine	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
3-Nitroaniline	NELAP	0.040		**ND**	mg/L	1	03/08/2016 8:45	116867
4,6-Dinitro-2-methylphenol	NELAP	0.020		**ND**	mg/L	1	03/08/2016 8:45	116867
4-Bromophenyl phenyl ether	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
4-Chloro-3-methylphenol	NELAP	0.020		**ND**	mg/L	1	03/08/2016 8:45	116867
4-Chloroaniline	NELAP	0.020		**ND**	mg/L	1	03/08/2016 8:45	116867
4-Chlorophenyl phenyl ether	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
4-Nitroaniline	NELAP	0.020		**ND**	mg/L	1	03/08/2016 8:45	116867

Laboratory Results

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Client: Missouri Geological Survey
Work Order: 16030376
Client Project: Appendix I & II
Report Date: 10-Mar-16
Lab ID: 16030376-001
Client Sample ID: PZ-116-SS
Matrix: GROUNDWATER
Collection Date: 03/03/2016 14:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
4-Nitrophenol	NELAP	0.020		**ND**	mg/L	1	03/08/2016 8:45	116867
Acenaphthene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Acenaphthylene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Anthracene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Benzo(a)anthracene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Benzo(a)pyrene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Benzo(b)fluoranthene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Benzo(g,h,i)perylene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Benzo(k)fluoranthene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Benzyl alcohol	NELAP	0.020		**ND**	mg/L	1	03/08/2016 8:45	116867
Bis(2-chloroethoxy)methane	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Bis(2-chloroethyl)ether	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Bis(2-chloroisopropyl)ether	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Bis(2-ethylhexyl)phthalate	NELAP	0.006		**ND**	mg/L	1	03/08/2016 8:45	116867
Butyl benzyl phthalate	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Chrysene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Dibenzo(a,h)anthracene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Dibenzofuran	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Diethyl phthalate	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Dimethyl phthalate	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Di-n-butyl phthalate	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Di-n-octyl phthalate	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Fluoranthene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Fluorene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Hexachlorobenzene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Hexachlorocyclopentadiene	NELAP	0.020		**ND**	mg/L	1	03/08/2016 8:45	116867
Indeno(1,2,3-cd)pyrene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Isophorone	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
m,p-Cresol	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Naphthalene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Nitrobenzene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
N-Nitrosodimethylamine	NELAP	0.020		**ND**	mg/L	1	03/08/2016 8:45	116867
N-Nitroso-di-n-propylamine	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
N-Nitrosodiphenylamine	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
o-Cresol	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Pentachlorophenol	NELAP	0.020		**ND**	mg/L	1	03/08/2016 8:45	116867
Phenanthrene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Phenol	NELAP	0.005		**ND**	mg/L	1	03/08/2016 8:45	116867
Pyrene	NELAP	0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
1,2-Diphenylhydrazine		0.010		**ND**	mg/L	1	03/08/2016 8:45	116867
Surr: 2,4,6-Tribromophenol		36.9-125		**67.1**	%REC	1	03/08/2016 8:45	116867
Surr: 2-Fluorobiphenyl		36.7-114		**73.3**	%REC	1	03/08/2016 8:45	116867
Surr: 2-Fluorophenol		23.9-78.3		**43.4**	%REC	1	03/08/2016 8:45	116867
Surr: Nitrobenzene-d5		49.9-124		**60.2**	%REC	1	03/08/2016 8:45	116867
Surr: Phenol-d5		14.1-51.6		**31.1**	%REC	1	03/08/2016 8:45	116867
Surr: p-Terphenyl-d14		41.6-133		**74.8**	%REC	1	03/08/2016 8:45	116867

Laboratory Results

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Client: Missouri Geological Survey
Work Order: 16030376
Client Project: Appendix I & II
Report Date: 10-Mar-16
Lab ID: 16030376-001
Client Sample ID: PZ-116-SS
Matrix: GROUNDWATER
Collection Date: 03/03/2016 14:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,1,1-Trichloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,1,2,2-Tetrachloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,1,2-Trichloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,1-Dichloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,1-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,1-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,2,3-Trichloropropane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,2-Dibromo-3-chloropropane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,2-Dibromoethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,2-Dichlorobenzene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,2-Dichloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,2-Dichloropropane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,3-Dichlorobenzene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,3-Dichloropropane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
1,4-Dichlorobenzene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
2,2-Dichloropropane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
2-Butanone	NELAP	25.0		**ND**	µg/L	1	03/07/2016 11:10	116914
2-Hexanone	NELAP	25.0		**ND**	µg/L	1	03/07/2016 11:10	116914
4-Methyl-2-pentanone	NELAP	25.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Acetone	NELAP	25.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Acetonitrile	NELAP	50.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Acrolein	NELAP	100		**ND**	µg/L	1	03/07/2016 11:10	116914
Acrylonitrile	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Allyl chloride	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Benzene	NELAP	2.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Bromochloromethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Bromodichloromethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Bromoform	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Bromomethane	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Carbon disulfide	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Carbon tetrachloride	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Chlorobenzene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Chloroethane	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Chloroform	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Chloromethane	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:10	116914
cis-1,2-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
cis-1,3-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Dibromochloromethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Dibromomethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Dichlorodifluoromethane	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Ethylbenzene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Hexachloroethane	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Iodomethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
m,p-Xylenes	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914

Laboratory Results

http://www.teklabinc.com/

Client: Missouri Geological Survey
Work Order: 16030376
Client Project: Appendix I & II
Report Date: 10-Mar-16
Lab ID: 16030376-001
Client Sample ID: PZ-116-SS
Matrix: GROUNDWATER
Collection Date: 03/03/2016 14:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Methacrylonitrile	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Methylene chloride	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Naphthalene	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:10	116914
o-Xylene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Propionitrile	NELAP	50.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Styrene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Tetrachloroethene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Toluene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
trans-1,2-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
trans-1,3-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
trans-1,4-Dichloro-2-butene	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Trichloroethene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Vinyl acetate	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Xylenes, Total	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:10	116914
Surr: 1,2-Dichloroethane-d4		74.7-129		**101.3**	%REC	1	03/07/2016 11:10	116914
Surr: 4-Bromofluorobenzene		86-119		**101.2**	%REC	1	03/07/2016 11:10	116914
Surr: Dibromofluoromethane		81.7-123		**94.1**	%REC	1	03/07/2016 11:10	116914
Surr: Toluene-d8		84.3-114		**99.3**	%REC	1	03/07/2016 11:10	116914

Laboratory Results

http://www.teklabinc.com/

Client: Missouri Geological Survey
Work Order: 16030376
Client Project: Appendix I & II
Report Date: 10-Mar-16
Lab ID: 16030376-002
Client Sample ID: Trip Blank
Matrix: TRIP BLANK
Collection Date: 03/04/2016 16:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,1,1-Trichloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,1,2,2-Tetrachloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,1,2-Trichloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,1-Dichloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,1-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,1-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,2,3-Trichloropropane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,2-Dibromo-3-chloropropane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,2-Dibromoethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,2-Dichlorobenzene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,2-Dichloroethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,2-Dichloropropane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,3-Dichlorobenzene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,3-Dichloropropane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
1,4-Dichlorobenzene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
2,2-Dichloropropane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
2-Butanone	NELAP	25.0		**ND**	µg/L	1	03/07/2016 11:36	116914
2-Hexanone	NELAP	25.0		**ND**	µg/L	1	03/07/2016 11:36	116914
4-Methyl-2-pentanone	NELAP	25.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Acetone	NELAP	25.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Acetonitrile	NELAP	50.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Acrolein	NELAP	100		**ND**	µg/L	1	03/07/2016 11:36	116914
Acrylonitrile	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Allyl chloride	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Benzene	NELAP	2.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Bromochloromethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Bromodichloromethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Bromoform	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Bromomethane	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Carbon disulfide	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Carbon tetrachloride	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Chlorobenzene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Chloroethane	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Chloroform	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Chloromethane	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:36	116914
cis-1,2-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
cis-1,3-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Dibromochloromethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Dibromomethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Dichlorodifluoromethane	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Ethylbenzene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Hexachloroethane	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Iodomethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
m,p-Xylenes	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914

Laboratory Results

http://www.teklabinc.com/

Client: Missouri Geological Survey
Work Order: 16030376
Client Project: Appendix I & II
Report Date: 10-Mar-16
Lab ID: 16030376-002
Client Sample ID: Trip Blank
Matrix: TRIP BLANK
Collection Date: 03/04/2016 16:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Methacrylonitrile	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Methylene chloride	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Naphthalene	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:36	116914
o-Xylene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Propionitrile	NELAP	50.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Styrene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Tetrachloroethene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Toluene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
trans-1,2-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
trans-1,3-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
trans-1,4-Dichloro-2-butene	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Trichloroethene	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Vinyl acetate	NELAP	10.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Xylenes, Total	NELAP	5.0		**ND**	µg/L	1	03/07/2016 11:36	116914
Surr: 1,2-Dichloroethane-d4		74.7-129		**100.2**	%REC	1	03/07/2016 11:36	116914
Surr: 4-Bromofluorobenzene		86-119		**100.9**	%REC	1	03/07/2016 11:36	116914
Surr: Dibromofluoromethane		81.7-123		**93.3**	%REC	1	03/07/2016 11:36	116914
Surr: Toluene-d8		84.3-114		**99.4**	%REC	1	03/07/2016 11:36	116914

Sample Summary

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030376
Report Date: 10-Mar-16

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
16030376-001	PZ-116-SS	Groundwater	5	03/03/2016 14:00
16030376-002	Trip Blank	Trip Blank	1	03/04/2016 16:00

Dates Report

http://www.teklabinc.com/

Client: Missouri Geological Survey

Client Project: Appendix I & II

Work Order: 16030376

Report Date: 10-Mar-16

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
16030376-001A	PZ-116-SS	03/03/2016 14:00	03/04/2016 16:00		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			03/04/2016 17:43	03/08/2016 8:45
16030376-001B	PZ-116-SS	03/03/2016 14:00	03/04/2016 16:00		
	SW-846 9036 (Total)				03/07/2016 15:22
16030376-001C	PZ-116-SS	03/03/2016 14:00	03/04/2016 16:00		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/07/2016 16:32	03/08/2016 21:11
	SW-846 7470A (Total)			03/07/2016 17:45	03/08/2016 13:55
16030376-001D	PZ-116-SS	03/03/2016 14:00	03/04/2016 16:00		
	SW-846 9060				03/07/2016 15:14
16030376-001E	PZ-116-SS	03/03/2016 14:00	03/04/2016 16:00		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				03/07/2016 11:10
16030376-002A	Trip Blank	03/04/2016 16:00	03/04/2016 16:00		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				03/07/2016 11:36

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 9036 (TOTAL)

Batch R215700 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**< 10**						03/07/2016

Batch R215700 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**19**	20.00	0	95.2	90	110	03/07/2016

Batch R215700 **SampType:** MS Units **mg/L**
SampID: 16030376-001BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**48**	10.00	37.77	100.6	85	115	03/07/2016

Batch R215700 **SampType:** MSD Units **mg/L** RPD Limit **10**
SampID: 16030376-001BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate	10		**48**	10.00	37.77	103.0	47.83	0.50	03/07/2016

SW-846 9060

Batch R215672 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	1.0		**< 1.0**						03/07/2016

Batch R215672 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	10.0		**78.4**	77.60	0	101.0	90	110	03/07/2016

Batch R215672 **SampType:** MS Units **mg/L**
SampID: 16030376-001DMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	1.0		**5.3**	5.000	0.7700	91.0	85	115	03/07/2016

Batch R215672 **SampType:** MSD Units **mg/L** RPD Limit **10**
SampID: 16030376-001DMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Organic Carbon (TOC)	1.0		**5.5**	5.000	0.7700	94.2	5.320	2.96	03/07/2016

Quality Control Results

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030376
Report Date: 10-Mar-16

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 116932 **SampType:** MBLK Units **mg/L**
SampID: MBLK-116932

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**< 0.0500**	0.05000	0	0	-100	100	03/08/2016
Arsenic	0.0250		**< 0.0250**	0.02500	0	0	-100	100	03/08/2016
Barium	0.0025		**< 0.0025**	0.00250	0	0	-100	100	03/08/2016
Beryllium	0.0005		**< 0.0005**	0.00050	0	0	-100	100	03/08/2016
Cadmium	0.0020		**< 0.0020**	0.00200	0	0	-100	100	03/08/2016
Chromium	0.0050		**< 0.0050**	0.00500	0	0	-100	100	03/08/2016
Cobalt	0.0050		**< 0.0050**	0.00500	0	0	-100	100	03/08/2016
Copper	0.0050		**< 0.0050**	0.00500	0	0	-100	100	03/08/2016
Lead	0.0150		**< 0.0150**	0.01500	0	0	-100	100	03/08/2016
Magnesium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	03/08/2016
Manganese	0.0030		**< 0.0030**	0.00300	0	0	-100	100	03/08/2016
Nickel	0.0050		**< 0.0050**	0.00500	0	0	-100	100	03/08/2016
Selenium	0.0400		**< 0.0400**	0.04000	0	0	-100	100	03/08/2016
Silver	0.0050		**< 0.0050**	0.00500	0	0	-100	100	03/08/2016
Thallium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	03/08/2016
Tin	0.0200		**< 0.0200**	0.02000	0	0	-100	100	03/08/2016
Vanadium	0.0100		**< 0.0100**	0.01000	0	0	-100	100	03/08/2016
Zinc	0.0100	J	**0.0021**	0.01000	0	21.0	-100	100	03/08/2016

Batch 116932 **SampType:** LCS Units **mg/L**
SampID: LCS-116932

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**0.480**	0.5000	0	96.0	85	115	03/08/2016
Arsenic	0.0250		**0.484**	0.5000	0	96.7	85	115	03/08/2016
Barium	0.0025		**2.01**	2.000	0	100.4	85	115	03/08/2016
Beryllium	0.0005		**0.0497**	0.05000	0	99.4	85	115	03/08/2016
Cadmium	0.0020		**0.0490**	0.05000	0	98.0	85	115	03/08/2016
Chromium	0.0050		**0.207**	0.2000	0	103.4	85	115	03/08/2016
Cobalt	0.0050		**0.485**	0.5000	0	96.9	85	115	03/08/2016
Copper	0.0050		**0.237**	0.2500	0	94.8	85	115	03/08/2016
Lead	0.0150		**0.515**	0.5000	0	103.0	85	115	03/08/2016
Magnesium	0.0500		**2.44**	2.500	0	97.8	85	115	03/08/2016
Manganese	0.0030		**0.493**	0.5000	0	98.6	85	115	03/08/2016
Nickel	0.0050		**0.486**	0.5000	0	97.1	85	115	03/08/2016
Selenium	0.0400		**0.501**	0.5000	0	100.2	85	115	03/08/2016
Silver	0.0050		**0.0489**	0.05000	0	97.8	85	115	03/08/2016
Thallium	0.0500		**0.240**	0.2500	0	96.1	85	115	03/08/2016
Tin	0.0200		**0.480**	0.5000	0	96.1	85	115	03/08/2016
Vanadium	0.0100		**0.490**	0.5000	0	98.0	85	115	03/08/2016
Zinc	0.0100		**0.488**	0.5000	0	97.5	85	115	03/08/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 116932 **SampType:** MS Units **mg/L**

SampID: 16030376-001CMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**0.479**	0.5000	0	95.7	75	125	03/08/2016
Arsenic	0.0250		**0.480**	0.5000	0	96.0	75	125	03/08/2016
Barium	0.0025		**2.05**	2.000	0.07970	98.6	75	125	03/08/2016
Beryllium	0.0005		**0.0490**	0.05000	0	98.0	75	125	03/08/2016
Cadmium	0.0020		**0.0477**	0.05000	0	95.4	75	125	03/08/2016
Chromium	0.0050		**0.203**	0.2000	0	101.5	75	125	03/08/2016
Cobalt	0.0050		**0.475**	0.5000	0	95.0	75	125	03/08/2016
Copper	0.0050		**0.235**	0.2500	0	94.0	75	125	03/08/2016
Lead	0.0150		**0.503**	0.5000	0	100.6	75	125	03/08/2016
Magnesium	0.0500	S	**34.5**	2.500	32.67	71.6	75	125	03/08/2016
Manganese	0.0030		**0.496**	0.5000	0.01200	96.8	75	125	03/08/2016
Nickel	0.0050		**0.476**	0.5000	0	95.3	75	125	03/08/2016
Selenium	0.0400		**0.486**	0.5000	0	97.2	75	125	03/08/2016
Silver	0.0050		**0.0482**	0.05000	0	96.4	75	125	03/08/2016
Thallium	0.0500		**0.236**	0.2500	0	94.2	75	125	03/08/2016
Tin	0.0200		**0.477**	0.5000	0	95.4	75	125	03/08/2016
Vanadium	0.0100		**0.485**	0.5000	0.001500	96.6	75	125	03/08/2016
Zinc	0.0100		**0.482**	0.5000	0.007500	94.8	75	125	03/08/2016

Batch 116932 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 16030376-001CMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony	0.0500		**0.477**	0.5000	0	95.3	0.4787	0.42	03/08/2016
Arsenic	0.0250		**0.484**	0.5000	0	96.9	0.4798	0.93	03/08/2016
Barium	0.0025		**2.06**	2.000	0.07970	99.1	2.052	0.49	03/08/2016
Beryllium	0.0005		**0.0489**	0.05000	0	97.8	0.04900	0.20	03/08/2016
Cadmium	0.0020		**0.0479**	0.05000	0	95.8	0.04770	0.42	03/08/2016
Chromium	0.0050		**0.204**	0.2000	0	101.8	0.2029	0.34	03/08/2016
Cobalt	0.0050		**0.474**	0.5000	0	94.8	0.4748	0.13	03/08/2016
Copper	0.0050		**0.237**	0.2500	0	94.7	0.2351	0.72	03/08/2016
Lead	0.0150		**0.505**	0.5000	0	101.0	0.5030	0.42	03/08/2016
Magnesium	0.0500		**34.6**	2.500	32.67	76.4	34.46	0.35	03/08/2016
Manganese	0.0030		**0.498**	0.5000	0.01200	97.2	0.4962	0.32	03/08/2016
Nickel	0.0050		**0.478**	0.5000	0	95.6	0.4763	0.38	03/08/2016
Selenium	0.0400		**0.493**	0.5000	0	98.5	0.4861	1.35	03/08/2016
Silver	0.0050		**0.0481**	0.05000	0	96.2	0.04820	0.21	03/08/2016
Thallium	0.0500		**0.240**	0.2500	0	95.8	0.2355	1.68	03/08/2016
Tin	0.0200		**0.476**	0.5000	0	95.2	0.4769	0.17	03/08/2016
Vanadium	0.0100		**0.485**	0.5000	0.001500	96.8	0.4847	0.12	03/08/2016
Zinc	0.0100		**0.484**	0.5000	0.007500	95.3	0.4816	0.52	03/08/2016

Quality Control Results

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Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030376
Report Date: 10-Mar-16

SW-846 7470A (TOTAL)

Batch **116938** **SampType:** **MBLK** Units **mg/L**
SampID: MBLK-116938

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**< 0.00020**	.000200	0	0	-100	100	03/08/2016

Batch **116938** **SampType:** **LCS** Units **mg/L**
SampID: LCS-116938

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**0.00455**	0.00500	0	90.9	85	115	03/08/2016

Batch **116938** **SampType:** **MS** Units **mg/L**
SampID: 16030376-001CMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**0.00452**	0.00500	0	90.3	75	125	03/08/2016

Batch **116938** **SampType:** **MSD** Units **mg/L** RPD Limit **15**
SampID: 16030376-001CMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury	0.00020		**0.00443**	0.00500	0	88.5	0.004515	1.97	03/08/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **116867** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-116867

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**ND**						03/08/2016
2,4,5-Trichlorophenol	0.010		**ND**						03/08/2016
2,4,6-Trichlorophenol	0.010		**ND**						03/08/2016
2,4-Dichlorophenol	0.010		**ND**						03/08/2016
2,4-Dimethylphenol	0.010		**ND**						03/08/2016
2,4-Dinitrophenol	0.020		**ND**						03/08/2016
2,4-Dinitrotoluene	0.010		**ND**						03/08/2016
2,6-Dinitrotoluene	0.010		**ND**						03/08/2016
2-Chloronaphthalene	0.010		**ND**						03/08/2016
2-Chlorophenol	0.010		**ND**						03/08/2016
2-Methylnaphthalene	0.010		**ND**						03/08/2016
2-Nitroaniline	0.040		**ND**						03/08/2016
2-Nitrophenol	0.020		**ND**						03/08/2016
3,3´-Dichlorobenzidine	0.010		**ND**						03/08/2016
3-Nitroaniline	0.040		**ND**						03/08/2016
4,6-Dinitro-2-methylphenol	0.020		**ND**						03/08/2016
4-Bromophenyl phenyl ether	0.010		**ND**						03/08/2016
4-Chloro-3-methylphenol	0.020		**ND**						03/08/2016
4-Chloroaniline	0.020		**ND**						03/08/2016
4-Chlorophenyl phenyl ether	0.010		**ND**						03/08/2016
4-Nitroaniline	0.020		**ND**						03/08/2016
4-Nitrophenol	0.020		**ND**						03/08/2016
Acenaphthene	0.010		**ND**						03/08/2016
Acenaphthylene	0.010		**ND**						03/08/2016
Anthracene	0.010		**ND**						03/08/2016
Benzo(a)anthracene	0.010		**ND**						03/08/2016
Benzo(a)pyrene	0.010		**ND**						03/08/2016
Benzo(b)fluoranthene	0.010		**ND**						03/08/2016
Benzo(g,h,i)perylene	0.010		**ND**						03/08/2016
Benzo(k)fluoranthene	0.010		**ND**						03/08/2016
Benzyl alcohol	0.020		**ND**						03/08/2016
Bis(2-chloroethoxy)methane	0.010		**ND**						03/08/2016
Bis(2-chloroethyl)ether	0.010		**ND**						03/08/2016
Bis(2-chloroisopropyl)ether	0.010		**ND**						03/08/2016
Bis(2-ethylhexyl)phthalate	0.006		**ND**						03/08/2016
Butyl benzyl phthalate	0.010		**ND**						03/08/2016
Chrysene	0.010		**ND**						03/08/2016
Dibenzo(a,h)anthracene	0.010		**ND**						03/08/2016
Dibenzofuran	0.010		**ND**						03/08/2016
Diethyl phthalate	0.010		**ND**						03/08/2016
Dimethyl phthalate	0.010		**ND**						03/08/2016
Di-n-butyl phthalate	0.010		**ND**						03/08/2016
Di-n-octyl phthalate	0.010		**ND**						03/08/2016
Fluoranthene	0.010		**ND**						03/08/2016
Fluorene	0.010		**ND**						03/08/2016
Hexachlorobenzene	0.010		**ND**						03/08/2016
Hexachlorocyclopentadiene	0.020		**ND**						03/08/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **116867** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-116867

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Indeno(1,2,3-cd)pyrene	0.010		**ND**						03/08/2016
Isophorone	0.010		**ND**						03/08/2016
m,p-Cresol	0.010		**ND**						03/08/2016
Naphthalene	0.010		**ND**						03/08/2016
Nitrobenzene	0.010		**ND**						03/08/2016
N-Nitrosodimethylamine	0.020		**ND**						03/08/2016
N-Nitroso-di-n-propylamine	0.010		**ND**						03/08/2016
N-Nitrosodiphenylamine	0.010		**ND**						03/08/2016
o-Cresol	0.010		**ND**						03/08/2016
Pentachlorophenol	0.020		**ND**						03/08/2016
Phenanthrene	0.010		**ND**						03/08/2016
Phenol	0.005		**ND**						03/08/2016
Pyrene	0.010		**ND**						03/08/2016
1,2-Diphenylhydrazine	0.010		**ND**						03/08/2016
Surr: 2,4,6-Tribromophenol			**0.036**	0.05000		72.8	48.9	120	03/08/2016
Surr: 2-Fluorobiphenyl			**0.020**	0.02500		80.5	51.1	102	03/08/2016
Surr: 2-Fluorophenol			**0.027**	0.05000		53.5	32	75.8	03/08/2016
Surr: Nitrobenzene-d5			**0.016**	0.02500		63.9	19.5	133	03/08/2016
Surr: Phenol-d5			**0.019**	0.05000		38.5	24.1	54.7	03/08/2016
Surr: p-Terphenyl-d14			**0.022**	0.02500		89.4	51.6	124	03/08/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **116867** **SampType:** **LCS** Units **mg/L**

SampID: LCS-116867

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.041**	0.05000	0	82.0	42.3	104	03/08/2016
2,4,5-Trichlorophenol	0.010		**0.085**	0.1000	0	84.8	55	116	03/08/2016
2,4,6-Trichlorophenol	0.010		**0.080**	0.1000	0	79.8	52.3	109	03/08/2016
2,4-Dimethylphenol	0.010		**0.074**	0.1000	0	74.5	50	107	03/08/2016
2,4-Dinitrophenol	0.020		**0.063**	0.1000	0	63.0	5.78	112	03/08/2016
2,4-Dinitrotoluene	0.010		**0.043**	0.05000	0	86.8	58.7	119	03/08/2016
2-Chlorophenol	0.010		**0.074**	0.1000	0	74.1	44.4	94.7	03/08/2016
4-Chloro-3-methylphenol	0.020		**0.074**	0.1000	0	74.5	52.1	109	03/08/2016
4-Nitrophenol	0.020		**0.041**	0.1000	0	41.1	24.2	55.7	03/08/2016
Acenaphthene	0.010		**0.041**	0.05000	0	81.8	51.2	109	03/08/2016
Acenaphthylene	0.010		**0.043**	0.05000	0	85.3	54.8	117	03/08/2016
Anthracene	0.010		**0.042**	0.05000	0	84.6	56.1	116	03/08/2016
Benzo(a)anthracene	0.010		**0.042**	0.05000	0	83.1	55	113	03/08/2016
Benzo(a)pyrene	0.010		**0.044**	0.05000	0	87.8	60.4	126	03/08/2016
Benzo(b)fluoranthene	0.010		**0.043**	0.05000	0	86.4	57.6	119	03/08/2016
Benzo(g,h,i)perylene	0.010		**0.043**	0.05000	0	86.2	51.2	130	03/08/2016
Benzo(k)fluoranthene	0.010		**0.045**	0.05000	0	90.8	57.9	126	03/08/2016
Bis(2-ethylhexyl)phthalate	0.006		**0.044**	0.05000	0	88.9	52.8	122	03/08/2016
Chrysene	0.010		**0.044**	0.05000	0	88.7	57.9	120	03/08/2016
Dibenzo(a,h)anthracene	0.010		**0.043**	0.05000	0	86.1	54.7	130	03/08/2016
Diethyl phthalate	0.010		**0.083**	0.1000	0	83.0	54.3	116	03/08/2016
Dimethyl phthalate	0.010		**0.079**	0.1000	0	78.8	53.5	111	03/08/2016
Di-n-butyl phthalate	0.010		**0.041**	0.05000	0	81.5	50.8	116	03/08/2016
Fluoranthene	0.010		**0.044**	0.05000	0	87.7	56.9	117	03/08/2016
Fluorene	0.010		**0.043**	0.05000	0	85.4	55.1	112	03/08/2016
Hexachlorobenzene	0.010		**0.078**	0.1000	0	77.6	54.3	119	03/08/2016
Indeno(1,2,3-cd)pyrene	0.010		**0.044**	0.05000	0	88.7	56.2	135	03/08/2016
m,p-Cresol	0.010		**0.030**	0.05000	0	60.7	39.5	94	03/08/2016
Naphthalene	0.010		**0.036**	0.05000	0	71.0	40.3	98.1	03/08/2016
Nitrobenzene	0.010		**0.060**	0.1000	0	59.7	44.9	95.5	03/08/2016
N-Nitroso-di-n-propylamine	0.010		**0.036**	0.05000	0	71.3	49.2	107	03/08/2016
o-Cresol	0.010		**0.034**	0.05000	0	68.4	42.5	95	03/08/2016
Pentachlorophenol	0.020		**0.064**	0.1000	0	63.7	35.2	104	03/08/2016
Phenanthrene	0.010		**0.042**	0.05000	0	83.3	55.2	115	03/08/2016
Phenol	0.005		**0.036**	0.1000	0	36.4	22.7	51.8	03/08/2016
Pyrene	0.010		**0.044**	0.05000	0	88.3	56	116	03/08/2016
Surr: 2,4,6-Tribromophenol			**0.041**	0.05000		81.9	48.9	120	03/08/2016
Surr: 2-Fluorobiphenyl			**0.019**	0.02500		74.9	51.1	102	03/08/2016
Surr: 2-Fluorophenol			**0.024**	0.05000		48.1	32	75.8	03/08/2016
Surr: Nitrobenzene-d5			**0.014**	0.02500		55.4	19.5	133	03/08/2016
Surr: Phenol-d5			**0.018**	0.05000		35.1	24.1	54.7	03/08/2016
Surr: p-Terphenyl-d14			**0.021**	0.02500		85.2	51.6	124	03/08/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **116867** **SampType:** **LCSD** Units **mg/L** RPD Limit **40**

SampID: LCSD-116867

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.039**	0.05000	0	79.0	0.04098	3.73	03/08/2016
2,4,5-Trichlorophenol	0.010		**0.082**	0.1000	0	81.8	0.08480	3.64	03/08/2016
2,4,6-Trichlorophenol	0.010		**0.080**	0.1000	0	79.6	0.07982	0.34	03/08/2016
2,4-Dimethylphenol	0.010		**0.072**	0.1000	0	72.2	0.07450	3.09	03/08/2016
2,4-Dinitrophenol	0.020		**0.064**	0.1000	0	64.1	0.06296	1.78	03/08/2016
2,4-Dinitrotoluene	0.010		**0.041**	0.05000	0	82.7	0.04339	4.81	03/08/2016
2-Chlorophenol	0.010		**0.071**	0.1000	0	71.3	0.07408	3.80	03/08/2016
4-Chloro-3-methylphenol	0.020		**0.074**	0.1000	0	74.2	0.07448	0.43	03/08/2016
4-Nitrophenol	0.020		**0.040**	0.1000	0	40.2	0.04114	2.34	03/08/2016
Acenaphthene	0.010		**0.039**	0.05000	0	78.0	0.04089	4.76	03/08/2016
Acenaphthylene	0.010		**0.041**	0.05000	0	81.5	0.04263	4.56	03/08/2016
Anthracene	0.010		**0.039**	0.05000	0	78.9	0.04229	6.95	03/08/2016
Benzo(a)anthracene	0.010		**0.039**	0.05000	0	78.0	0.04153	6.23	03/08/2016
Benzo(a)pyrene	0.010		**0.041**	0.05000	0	82.8	0.04390	5.81	03/08/2016
Benzo(b)fluoranthene	0.010		**0.041**	0.05000	0	83.0	0.04319	4.02	03/08/2016
Benzo(g,h,i)perylene	0.010		**0.041**	0.05000	0	82.2	0.04310	4.75	03/08/2016
Benzo(k)fluoranthene	0.010		**0.042**	0.05000	0	83.9	0.04540	7.85	03/08/2016
Bis(2-ethylhexyl)phthalate	0.006		**0.042**	0.05000	0	84.3	0.04443	5.27	03/08/2016
Chrysene	0.010		**0.042**	0.05000	0	83.6	0.04434	5.95	03/08/2016
Dibenzo(a,h)anthracene	0.010		**0.042**	0.05000	0	83.8	0.04307	2.80	03/08/2016
Diethyl phthalate	0.010		**0.078**	0.1000	0	77.6	0.08302	6.79	03/08/2016
Dimethyl phthalate	0.010		**0.075**	0.1000	0	74.5	0.07877	5.56	03/08/2016
Di-n-butyl phthalate	0.010		**0.039**	0.05000	0	78.0	0.04075	4.36	03/08/2016
Fluoranthene	0.010		**0.041**	0.05000	0	82.2	0.04384	6.48	03/08/2016
Fluorene	0.010		**0.041**	0.05000	0	81.4	0.04269	4.82	03/08/2016
Hexachlorobenzene	0.010		**0.075**	0.1000	0	75.1	0.07758	3.22	03/08/2016
Indeno(1,2,3-cd)pyrene	0.010		**0.043**	0.05000	0	85.7	0.04436	3.46	03/08/2016
m,p-Cresol	0.010		**0.030**	0.05000	0	60.0	0.03036	1.26	03/08/2016
Naphthalene	0.010		**0.035**	0.05000	0	70.0	0.03552	1.47	03/08/2016
Nitrobenzene	0.010		**0.057**	0.1000	0	57.3	0.05972	4.19	03/08/2016
N-Nitroso-di-n-propylamine	0.010		**0.034**	0.05000	0	67.3	0.03566	5.77	03/08/2016
o-Cresol	0.010		**0.032**	0.05000	0	64.3	0.03419	6.18	03/08/2016
Pentachlorophenol	0.020		**0.063**	0.1000	0	63.4	0.06371	0.50	03/08/2016
Phenanthrene	0.010		**0.040**	0.05000	0	80.2	0.04166	3.77	03/08/2016
Phenol	0.005		**0.036**	0.1000	0	35.6	0.03638	2.14	03/08/2016
Pyrene	0.010		**0.042**	0.05000	0	83.6	0.04416	5.44	03/08/2016
Surr: 2,4,6-Tribromophenol			**0.039**	0.05000		77.4			03/08/2016
Surr: 2-Fluorobiphenyl			**0.018**	0.02500		71.1			03/08/2016
Surr: 2-Fluorophenol			**0.023**	0.05000		46.0			03/08/2016
Surr: Nitrobenzene-d5			**0.013**	0.02500		52.2			03/08/2016
Surr: Phenol-d5			**0.017**	0.05000		33.5			03/08/2016
Surr: p-Terphenyl-d14			**0.021**	0.02500		82.6			03/08/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **116914** **SampType:** **MBLK** Units **µg/L**

SampID: MBLK-T160307-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**ND**						03/07/2016
1,1,1-Trichloroethane	5.0		**ND**						03/07/2016
1,1,2,2-Tetrachloroethane	5.0		**ND**						03/07/2016
1,1,2-Trichloroethane	5.0		**ND**						03/07/2016
1,1-Dichloroethane	5.0		**ND**						03/07/2016
1,1-Dichloroethene	5.0		**ND**						03/07/2016
1,1-Dichloropropene	5.0		**ND**						03/07/2016
1,2,3-Trichloropropane	5.0		**ND**						03/07/2016
1,2-Dibromo-3-chloropropane	5.0		**ND**						03/07/2016
1,2-Dibromoethane	5.0		**ND**						03/07/2016
1,2-Dichlorobenzene	5.0		**ND**						03/07/2016
1,2-Dichloroethane	5.0		**ND**						03/07/2016
1,2-Dichloropropane	5.0		**ND**						03/07/2016
1,3-Dichlorobenzene	5.0		**ND**						03/07/2016
1,3-Dichloropropane	5.0		**ND**						03/07/2016
1,4-Dichlorobenzene	5.0		**ND**						03/07/2016
2,2-Dichloropropane	5.0		**ND**						03/07/2016
2-Butanone	25.0		**ND**						03/07/2016
2-Hexanone	25.0		**ND**						03/07/2016
4-Methyl-2-pentanone	25.0		**ND**						03/07/2016
Acetone	25.0		**ND**						03/07/2016
Acetonitrile	50.0		**ND**						03/07/2016
Acrolein	100		**ND**						03/07/2016
Acrylonitrile	5.0		**ND**						03/07/2016
Allyl chloride	5.0		**ND**						03/07/2016
Benzene	2.0		**ND**						03/07/2016
Bromochloromethane	5.0		**ND**						03/07/2016
Bromodichloromethane	5.0		**ND**						03/07/2016
Bromoform	5.0		**ND**						03/07/2016
Bromomethane	10.0		**ND**						03/07/2016
Carbon disulfide	5.0		**ND**						03/07/2016
Carbon tetrachloride	5.0		**ND**						03/07/2016
Chlorobenzene	5.0		**ND**						03/07/2016
Chloroethane	10.0		**ND**						03/07/2016
Chloroform	5.0		**ND**						03/07/2016
Chloromethane	10.0		**ND**						03/07/2016
cis-1,2-Dichloroethene	5.0		**ND**						03/07/2016
cis-1,3-Dichloropropene	5.0		**ND**						03/07/2016
Dibromochloromethane	5.0		**ND**						03/07/2016
Dibromomethane	5.0		**ND**						03/07/2016
Dichlorodifluoromethane	10.0		**ND**						03/07/2016
Ethyl methacrylate	5.0		**ND**						03/07/2016
Ethylbenzene	5.0		**ND**						03/07/2016
Hexachlorobutadiene	5.0		**ND**						03/07/2016
Hexachloroethane	10.0		**ND**						03/07/2016
Iodomethane	5.0		**ND**						03/07/2016
m,p-Xylenes	5.0		**ND**						03/07/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **116914** **SampType:** **MBLK** Units **µg/L**

SampID: MBLK-T160307-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methacrylonitrile	10.0		**ND**						03/07/2016
Methyl Methacrylate	5.0		**ND**						03/07/2016
Methylene chloride	5.0		**ND**						03/07/2016
Naphthalene	10.0		**ND**						03/07/2016
o-Xylene	5.0		**ND**						03/07/2016
Propionitrile	50.0		**ND**						03/07/2016
Styrene	5.0		**ND**						03/07/2016
Tetrachloroethene	5.0		**ND**						03/07/2016
Toluene	5.0		**ND**						03/07/2016
trans-1,2-Dichloroethene	5.0		**ND**						03/07/2016
trans-1,3-Dichloropropene	5.0		**ND**						03/07/2016
trans-1,4-Dichloro-2-butene	10.0		**ND**						03/07/2016
Trichloroethene	5.0		**ND**						03/07/2016
Trichlorofluoromethane	5.0		**ND**						03/07/2016
Vinyl acetate	10.0		**ND**						03/07/2016
Vinyl chloride	2.0		**ND**						03/07/2016
Xylenes, Total	5.0		**ND**						03/07/2016
Surr: 1,2-Dichloroethane-d4			**50.2**	50.00		100.3	74.7	129	03/07/2016
Surr: 4-Bromofluorobenzene			**51.2**	50.00		102.5	86	119	03/07/2016
Surr: Dibromofluoromethane			**46.8**	50.00		93.6	81.7	123	03/07/2016
Surr: Toluene-d8			**50.0**	50.00		100.1	84.3	114	03/07/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **116914** **SampType:** **LCSD** Units **µg/L** RPD Limit **40**

SampID: LCSD-T160307-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**49.4**	50.00	0	98.7	49.12	0.51	03/07/2016
1,1,1-Trichloroethane	5.0		**46.6**	50.00	0	93.1	45.96	1.28	03/07/2016
1,1,2,2-Tetrachloroethane	5.0		**46.9**	50.00	0	93.8	46.56	0.73	03/07/2016
1,1,2-Trichloroethane	5.0		**48.6**	50.00	0	97.2	48.71	0.21	03/07/2016
1,1-Dichloroethane	5.0		**50.0**	50.00	0	99.9	49.96	0.00	03/07/2016
1,1-Dichloroethene	5.0		**44.9**	50.00	0	89.8	44.56	0.74	03/07/2016
1,1-Dichloropropene	5.0		**46.1**	50.00	0	92.2	45.54	1.24	03/07/2016
1,2,3-Trichloropropane	5.0		**43.0**	50.00	0	86.1	42.92	0.26	03/07/2016
1,2-Dibromo-3-chloropropane	5.0		**39.6**	50.00	0	79.2	39.33	0.63	03/07/2016
1,2-Dibromoethane	5.0		**48.0**	50.00	0	95.9	47.75	0.44	03/07/2016
1,2-Dichlorobenzene	5.0		**45.3**	50.00	0	90.7	44.44	2.00	03/07/2016
1,2-Dichloroethane	5.0		**46.6**	50.00	0	93.2	47.19	1.24	03/07/2016
1,2-Dichloropropane	5.0		**47.1**	50.00	0	94.1	46.76	0.64	03/07/2016
1,3-Dichlorobenzene	5.0		**46.8**	50.00	0	93.7	46.10	1.59	03/07/2016
1,3-Dichloropropane	5.0		**47.6**	50.00	0	95.3	47.22	0.86	03/07/2016
1,4-Dichlorobenzene	5.0		**46.3**	50.00	0	92.6	45.66	1.37	03/07/2016
2,2-Dichloropropane	5.0		**49.7**	50.00	0	99.3	49.41	0.52	03/07/2016
2-Butanone	25.0		**95.3**	125.0	0	76.3	98.53	3.31	03/07/2016
2-Hexanone	25.0		**108**	125.0	0	86.3	111.1	2.89	03/07/2016
4-Methyl-2-pentanone	25.0		**109**	125.0	0	87.3	110.8	1.51	03/07/2016
Acetone	25.0		**88.4**	125.0	0	70.7	93.40	5.52	03/07/2016
Acetonitrile	50.0		**401**	500.0	0	80.1	411.8	2.77	03/07/2016
Acrolein	100		**362**	500.0	0	72.3	363.4	0.49	03/07/2016
Acrylonitrile	5.0		**45.3**	50.00	0	90.5	45.72	1.01	03/07/2016
Allyl chloride	5.0		**49.4**	50.00	0	98.8	50.19	1.57	03/07/2016
Benzene	2.0		**45.9**	50.00	0	91.7	45.38	1.05	03/07/2016
Bromochloromethane	5.0		**48.7**	50.00	0	97.4	48.72	0.02	03/07/2016
Bromodichloromethane	5.0		**48.3**	50.00	0	96.5	47.92	0.73	03/07/2016
Bromoform	5.0		**48.0**	50.00	0	96.0	47.71	0.61	03/07/2016
Bromomethane	10.0		**42.1**	50.00	0	84.1	40.37	4.10	03/07/2016
Carbon disulfide	5.0		**43.0**	50.00	0	85.9	42.65	0.70	03/07/2016
Carbon tetrachloride	5.0		**46.5**	50.00	0	93.0	46.17	0.71	03/07/2016
Chlorobenzene	5.0		**46.8**	50.00	0	93.7	46.41	0.92	03/07/2016
Chloroethane	10.0		**40.5**	50.00	0	81.0	40.39	0.27	03/07/2016
Chloroform	5.0		**46.1**	50.00	0	92.2	45.75	0.74	03/07/2016
Chloromethane	10.0		**40.2**	50.00	0	80.3	39.45	1.78	03/07/2016
cis-1,2-Dichloroethene	5.0		**47.6**	50.00	0	95.3	47.77	0.27	03/07/2016
cis-1,3-Dichloropropene	5.0		**49.0**	50.00	0	98.0	48.95	0.12	03/07/2016
Dibromochloromethane	5.0		**50.4**	50.00	0	100.8	50.04	0.72	03/07/2016
Dibromomethane	5.0		**44.3**	50.00	0	88.5	44.49	0.52	03/07/2016
Dichlorodifluoromethane	10.0		**32.5**	50.00	0	65.0	31.81	2.15	03/07/2016
Ethyl methacrylate	5.0		**50.2**	50.00	0	100.4	50.42	0.48	03/07/2016
Ethylbenzene	5.0		**47.5**	50.00	0	94.9	47.14	0.68	03/07/2016
Hexachlorobutadiene	5.0		**42.9**	50.00	0	85.9	43.61	1.55	03/07/2016
Hexachloroethane	10.0		**46.8**	50.00	0	93.6	46.94	0.26	03/07/2016
Iodomethane	5.0		**43.9**	50.00	0	87.9	42.68	2.91	03/07/2016
m,p-Xylenes	5.0		**99.1**	100.0	0	99.1	98.13	0.99	03/07/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **116914** **SampType:** **LCSD** Units **µg/L** RPD Limit **40**

SampID: LCSD-T160307-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methacrylonitrile	10.0		**42.6**	50.00	0	85.2	43.46	1.95	03/07/2016
Methyl Methacrylate	5.0		**47.6**	50.00	0	95.3	48.50	1.77	03/07/2016
Methylene chloride	5.0		**46.8**	50.00	0	93.6	46.62	0.39	03/07/2016
Naphthalene	10.0		**44.2**	50.00	0	88.4	44.23	0.02	03/07/2016
o-Xylene	5.0		**47.9**	50.00	0	95.9	47.58	0.73	03/07/2016
Propionitrile	50.0		**389**	500.0	0	77.8	403.6	3.75	03/07/2016
Styrene	5.0		**52.3**	50.00	0	104.6	51.77	1.00	03/07/2016
Tetrachloroethene	5.0		**47.2**	50.00	0	94.5	46.61	1.36	03/07/2016
Toluene	5.0		**46.7**	50.00	0	93.5	46.34	0.86	03/07/2016
trans-1,2-Dichloroethene	5.0		**47.4**	50.00	0	94.9	46.90	1.14	03/07/2016
trans-1,3-Dichloropropene	5.0		**51.6**	50.00	0	103.1	51.59	0.08	03/07/2016
trans-1,4-Dichloro-2-butene	10.0		**48.4**	50.00	0	96.8	48.84	0.95	03/07/2016
Trichloroethene	5.0		**44.7**	50.00	0	89.4	44.50	0.45	03/07/2016
Trichlorofluoromethane	5.0		**44.4**	50.00	0	88.7	43.51	1.96	03/07/2016
Vinyl acetate	10.0		**50.8**	50.00	0	101.7	53.54	5.19	03/07/2016
Vinyl chloride	2.0		**41.4**	50.00	0	82.7	41.10	0.61	03/07/2016
Xylenes, Total	5.0		**147**	150.0	0	98.0	145.7	0.91	03/07/2016
Surr: 1,2-Dichloroethane-d4			**51.4**	50.00		102.8			03/07/2016
Surr: 4-Bromofluorobenzene			**51.2**	50.00		102.4			03/07/2016
Surr: Dibromofluoromethane			**47.5**	50.00		95.0			03/07/2016
Surr: Toluene-d8			**50.0**	50.00		100.0			03/07/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **116914** **SampType:** **LCS** Units **µg/L**

SampID: LCS-T160307-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**49.1**	50.00	0	98.2	81.9	115	03/07/2016
1,1,1-Trichloroethane	5.0		**46.0**	50.00	0	91.9	79.4	124	03/07/2016
1,1,2,2-Tetrachloroethane	5.0		**46.6**	50.00	0	93.1	74.7	116	03/07/2016
1,1,2-Trichloroethane	5.0		**48.7**	50.00	0	97.4	80.8	111	03/07/2016
1,1-Dichloroethane	5.0		**50.0**	50.00	0	99.9	79.4	114	03/07/2016
1,1-Dichloroethene	5.0		**44.6**	50.00	0	89.1	74.1	117	03/07/2016
1,1-Dichloropropene	5.0		**45.5**	50.00	0	91.1	81.7	116	03/07/2016
1,2,3-Trichloropropane	5.0		**42.9**	50.00	0	85.8	77.3	112	03/07/2016
1,2-Dibromo-3-chloropropane	5.0		**39.3**	50.00	0	78.7	76	122	03/07/2016
1,2-Dibromoethane	5.0		**47.8**	50.00	0	95.5	80.8	114	03/07/2016
1,2-Dichlorobenzene	5.0		**44.4**	50.00	0	88.9	78.3	112	03/07/2016
1,2-Dichloroethane	5.0		**47.2**	50.00	0	94.4	70.6	118	03/07/2016
1,2-Dichloropropane	5.0		**46.8**	50.00	0	93.5	79.6	113	03/07/2016
1,3-Dichlorobenzene	5.0		**46.1**	50.00	0	92.2	78.6	117	03/07/2016
1,3-Dichloropropane	5.0		**47.2**	50.00	0	94.4	78.8	112	03/07/2016
1,4-Dichlorobenzene	5.0		**45.7**	50.00	0	91.3	77.8	114	03/07/2016
2,2-Dichloropropane	5.0		**49.4**	50.00	0	98.8	74.9	130	03/07/2016
2-Butanone	25.0		**98.5**	125.0	0	78.8	70.7	136	03/07/2016
2-Hexanone	25.0		**111**	125.0	0	88.9	73.3	125	03/07/2016
4-Methyl-2-pentanone	25.0		**111**	125.0	0	88.6	76.3	122	03/07/2016
Acetone	25.0		**93.4**	125.0	0	74.7	56.4	147	03/07/2016
Acetonitrile	50.0		**412**	500.0	0	82.4	59.3	129	03/07/2016
Acrolein	100		**363**	500.0	0	72.7	1	201	03/07/2016
Acrylonitrile	5.0		**45.7**	50.00	0	91.4	74.1	128	03/07/2016
Allyl chloride	5.0		**50.2**	50.00	0	100.4	71.5	123	03/07/2016
Benzene	2.0		**45.4**	50.00	0	90.8	80	114	03/07/2016
Bromochloromethane	5.0		**48.7**	50.00	0	97.4	73.3	121	03/07/2016
Bromodichloromethane	5.0		**47.9**	50.00	0	95.8	81.6	121	03/07/2016
Bromoform	5.0		**47.7**	50.00	0	95.4	83.1	127	03/07/2016
Bromomethane	10.0		**40.4**	50.00	0	80.7	44.4	154	03/07/2016
Carbon disulfide	5.0		**42.6**	50.00	0	85.3	73.2	118	03/07/2016
Carbon tetrachloride	5.0		**46.2**	50.00	0	92.3	79.4	130	03/07/2016
Chlorobenzene	5.0		**46.4**	50.00	0	92.8	81.4	110	03/07/2016
Chloroethane	10.0		**40.4**	50.00	0	80.8	52.1	137	03/07/2016
Chloroform	5.0		**45.8**	50.00	0	91.5	82.7	116	03/07/2016
Chloromethane	10.0		**39.4**	50.00	0	78.9	48.2	144	03/07/2016
cis-1,2-Dichloroethene	5.0		**47.8**	50.00	0	95.5	78.2	116	03/07/2016
cis-1,3-Dichloropropene	5.0		**49.0**	50.00	0	97.9	83	119	03/07/2016
Dibromochloromethane	5.0		**50.0**	50.00	0	100.1	81.2	121	03/07/2016
Dibromomethane	5.0		**44.5**	50.00	0	89.0	78.3	118	03/07/2016
Dichlorodifluoromethane	10.0		**31.8**	50.00	0	63.6	20.6	154	03/07/2016
Ethyl methacrylate	5.0		**50.4**	50.00	0	100.8	80.1	113	03/07/2016
Ethylbenzene	5.0		**47.1**	50.00	0	94.3	77.2	113	03/07/2016
Hexachlorobutadiene	5.0		**43.6**	50.00	0	87.2	77.3	123	03/07/2016
Hexachloroethane	10.0		**46.9**	50.00	0	93.9	74.6	117	03/07/2016
Iodomethane	5.0		**42.7**	50.00	0	85.4	61.3	140	03/07/2016
m,p-Xylenes	5.0		**98.1**	100.0	0	98.1	79.6	113	03/07/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 116914 **SampType:** LCS Units µg/L

SampID: LCS-T160307-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methacrylonitrile	10.0		**43.5**	50.00	0	86.9	77.2	125	03/07/2016
Methyl Methacrylate	5.0		**48.5**	50.00	0	97.0	74.2	121	03/07/2016
Methylene chloride	5.0		**46.6**	50.00	0	93.2	74.1	114	03/07/2016
Naphthalene	10.0		**44.2**	50.00	0	88.5	77.9	122	03/07/2016
o-Xylene	5.0		**47.6**	50.00	0	95.2	80.1	111	03/07/2016
Propionitrile	50.0		**404**	500.0	0	80.7	72.9	137	03/07/2016
Styrene	5.0		**51.8**	50.00	0	103.5	83.4	113	03/07/2016
Tetrachloroethene	5.0		**46.6**	50.00	0	93.2	72.5	125	03/07/2016
Toluene	5.0		**46.3**	50.00	0	92.7	77.5	113	03/07/2016
trans-1,2-Dichloroethene	5.0		**46.9**	50.00	0	93.8	79	114	03/07/2016
trans-1,3-Dichloropropene	5.0		**51.6**	50.00	0	103.2	78	115	03/07/2016
trans-1,4-Dichloro-2-butene	10.0		**48.8**	50.00	0	97.7	63.3	128	03/07/2016
Trichloroethene	5.0		**44.5**	50.00	0	89.0	84.4	114	03/07/2016
Trichlorofluoromethane	5.0		**43.5**	50.00	0	87.0	75.2	132	03/07/2016
Vinyl acetate	10.0		**53.5**	50.00	0	107.1	64.5	127	03/07/2016
Vinyl chloride	2.0		**41.1**	50.00	0	82.2	58	134	03/07/2016
Xylenes, Total	5.0		**146**	150.0	0	97.1	80.1	111	03/07/2016
Surr: 1,2-Dichloroethane-d4			**52.0**	50.00		103.9	74.7	129	03/07/2016
Surr: 4-Bromofluorobenzene			**51.4**	50.00		102.9	86	119	03/07/2016
Surr: Dibromofluoromethane			**48.4**	50.00		96.8	81.7	123	03/07/2016
Surr: Toluene-d8			**50.6**	50.00		101.1	84.1	114	03/07/2016

Batch 116914 **SampType:** MS Units µg/L

SampID: 16030376-001EMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1-Dichloroethene	5.0		**49.7**	50.00	0	99.5	35.7	136	03/07/2016
Benzene	2.0		**53.2**	50.00	0	106.3	62.5	121	03/07/2016
Chlorobenzene	5.0		**54.2**	50.00	0	108.4	78.6	114	03/07/2016
Ethylbenzene	5.0		**54.8**	50.00	0	109.6	74.4	130	03/07/2016
m,p-Xylenes	5.0		**56.6**	50.00	0	113.3	70.5	126	03/07/2016
o-Xylene	5.0		**53.4**	50.00	0	106.8	71.2	124	03/07/2016
Toluene	5.0		**52.3**	50.00	0	104.7	69.5	118	03/07/2016
Trichloroethene	5.0		**53.9**	50.00	0	107.8	69.4	117	03/07/2016
Xylenes, Total	5.0		**110**	100.0	0	110.0	71.1	125	03/07/2016
Surr: 1,2-Dichloroethane-d4			**51.6**	50.00		103.2	74.7	129	03/07/2016
Surr: 4-Bromofluorobenzene			**52.0**	50.00		104.0	86	119	03/07/2016
Surr: Dibromofluoromethane			**46.7**	50.00		93.4	81.7	123	03/07/2016
Surr: Toluene-d8			**49.8**	50.00		99.5	84.3	114	03/07/2016

Client: Missouri Geological Survey **Work Order:** 16030376

Client Project: Appendix I & II **Report Date:** 10-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 116914 **SampType: MSD** Units **µg/L** RPD Limit **20**

SampID: 16030376-001EMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1-Dichloroethene	5.0		**46.0**	50.00	0	92.1	49.74	7.73	03/07/2016
Benzene	2.0		**49.8**	50.00	0	99.6	53.17	6.57	03/07/2016
Chlorobenzene	5.0		**50.6**	50.00	0	101.3	54.19	6.77	03/07/2016
Ethylbenzene	5.0		**51.4**	50.00	0	102.9	54.81	6.36	03/07/2016
m,p-Xylenes	5.0		**52.9**	50.00	0	105.9	56.64	6.77	03/07/2016
o-Xylene	5.0		**50.3**	50.00	0	100.7	53.40	5.90	03/07/2016
Toluene	5.0		**49.0**	50.00	0	98.0	52.34	6.59	03/07/2016
Trichloroethene	5.0		**49.3**	50.00	0	98.6	53.91	8.91	03/07/2016
Xylenes, Total	5.0		**103**	100.0	0	103.3	110.0	6.35	03/07/2016
Surr: 1,2-Dichloroethane-d4			**50.6**	50.00		101.2			03/07/2016
Surr: 4-Bromofluorobenzene			**52.0**	50.00		103.9			03/07/2016
Surr: Dibromofluoromethane			**46.6**	50.00		93.1			03/07/2016
Surr: Toluene-d8			**49.8**	50.00		99.7			03/07/2016

Receiving Check List

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030376
Report Date: 10-Mar-16

Carrier: Nick Harvey

Received By: AMD

Completed by: Amber Dilallo
On: 04-Mar-16

Reviewed by: Elizabeth A. Hurley
On: 04-Mar-16

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 5.22
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

Trip Blank collection date and time will be reported as the received date and time (end of trip).

CHAIN OF CUSTODY

pg. ____ of ____ Work order # 16030376

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client: Missouri Geological Survey
Address: 111 Fairgrounds Road
City / State / Zip Rolla, MO 65401
Contact: Brenna McDonald **Phone:** (573) 368-2163 (573) 453-4329
E-Mail: brenna.mcdonald@dnr.mo.gov **Fax:**

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 5.22 °C
Preserved in: [ ] LAB [✓] FIELD
FOR LAB USE ONLY
Lab Notes: OMP 3-4-16 zero head space OMP 3-4-16

Client Comments: Metals: Sb As Ba Be Cd Cr Co Cu Pb Mg Mn Ni Se Ag Tl Sn V Zn
courier Pick Up
~~ONE DAY TAT~~ EAH 3/4/16

Are these samples known to be involved in litigation? If yes, a surcharge will apply [X] Yes [ ] No
Are these samples known to be hazardous? [ ] Yes [X] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section. [ ] Yes [X] No

Project Name/Number: Appendix I & II
Sample Collector's Name: BRENNA McDONALD

Results Requested: [X] Standard [ ] 1-2 Day (100% Surcharge) [ ] Other ____ [ ] 3 Day (50% Surcharge)
Billing Instructions:

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER	MATRIX: Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	Hg	Metals	Sulfate	SVOCs	TOC	VOCs
16030376 001	PZ-116-SS	3/3/16 1400	2	1		1	2									X	✓	✓	✓	✓	✓	✓
002	TRIPBLANK	3/3/16 0800					2															

Relinquished By	Date/Time	Received By	Date/Time
Brenna McDonald	3/4/16 1550		3/4/16 1530
	3/4/16 1600	Omar Olalla	3/4/16 400

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client.

BottleOrder: 29706

OMP 3-4-16

March 15, 2016

Brenna McDonald
Missouri Geological Survey
111 Fairgrounds Road
Rolla, MO 65401
TEL: (573) 368-2163
FAX:

RE: Appendix I & II **WorkOrder:** 16030645

Dear Brenna McDonald:

TEKLAB, INC received 1 sample on 3/9/2016 4:03:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Emily E. Pohlman
Project Manager
(618)344-1004 ex 44
epohlman@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030645
Report Date: 15-Mar-16

This reporting package includes the following:

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Report Contents	2
Definitions	3
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Quality Control Results	11
Receiving Check List	28
Chain of Custody	Appended

Definitions

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

Abbr	Definition
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
DNI	Did not ignite
DUP	Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Qualifiers

# -	Unknown hydrocarbon	B -	Analyte detected in associated Method Blank
E -	Value above quantitation range	H -	Holding times exceeded
I -	Associated internal standard was outside method criteria	J -	Analyte detected below quantitation limits
M -	Manual Integration used to determine area response	ND -	Not Detected at the Reporting Limit
R -	RPD outside accepted recovery limits	S -	Spike Recovery outside recovery limits
T -	TIC(Tentatively identified compound)	X -	Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030645
Report Date: 15-Mar-16

Cooler Receipt Temp: 5.42 °C

Locations and Accreditations

	Collinsville	Springfield	Kansas City	Collinsville Air
Address	5445 Horseshoe Lake Road	3920 Pintail Dr	8421 Nieman Road	5445 Horseshoe Lake Road
	Collinsville, IL 62234-7425	Springfield, IL 62711-9415	Lenexa, KS 66214	Collinsville, IL 62234-7425
Phone	(618) 344-1004	(217) 698-1004	(913) 541-1998	(618) 344-1004
Fax	(618) 344-1005	(217) 698-1005	(913) 541-1998	(618) 344-1005
Email	jhriley@teklabinc.com	KKlostermann@teklabinc.com	dthompson@teklabinc.com	EHurley@teklabinc.com

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2017	Collinsville
Kansas	KDHE	E-10374	NELAP	5/31/2016	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2016	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2016	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2016	Collinsville
Arkansas	ADEQ	88-0966		3/14/2017	Collinsville
Illinois	IDPH	17584		5/31/2017	Collinsville
Kentucky	KDEP	98006		12/31/2016	Collinsville
Kentucky	UST	0073		1/31/2017	Collinsville
Missouri	MDNR	00930		5/31/2017	Collinsville
Oklahoma	ODEQ	9978		8/31/2016	Collinsville

Laboratory Results

http://www.teklabinc.com/

Client: Missouri Geological Survey
Work Order: 16030645
Client Project: Appendix I & II
Report Date: 15-Mar-16
Lab ID: 16030645-001
Client Sample ID: PZ-103-SS
Matrix: GROUNDWATER
Collection Date: 03/08/2016 10:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10	JS	**6**	mg/L	1	03/10/2016 23:32	R215839
MS and/or MSD did not recover within control limits due to matrix interference.								
SW-846 9060								
Total Organic Carbon (TOC)	NELAP	5.0		**7.2**	mg/L	5	03/11/2016 13:02	R215864
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	03/11/2016 9:45	117060
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	03/11/2016 9:45	117060
Barium	NELAP	0.0025		**0.694**	mg/L	1	03/11/2016 9:45	117060
Beryllium	NELAP	0.0005		**0.0005**	mg/L	1	03/11/2016 9:45	117060
Cadmium	NELAP	0.0020	J	**0.0008**	mg/L	1	03/11/2016 9:45	117060
Chromium	NELAP	0.0050		**0.0115**	mg/L	1	03/11/2016 9:45	117060
Cobalt	NELAP	0.0050	J	**0.0035**	mg/L	1	03/11/2016 9:45	117060
Copper	NELAP	0.0050		**0.0069**	mg/L	1	03/11/2016 9:45	117060
Lead	NELAP	0.0150	J	**0.0046**	mg/L	1	03/11/2016 9:45	117060
Magnesium	NELAP	0.0500	S	**93.8**	mg/L	1	03/11/2016 9:45	117060
Manganese	NELAP	0.0030		**0.484**	mg/L	1	03/11/2016 9:45	117060
Nickel	NELAP	0.0050		**0.0198**	mg/L	1	03/11/2016 9:45	117060
Selenium	NELAP	0.0400		**< 0.0400**	mg/L	1	03/11/2016 9:45	117060
Silver	NELAP	0.0050		**< 0.0050**	mg/L	1	03/11/2016 9:45	117060
Thallium	NELAP	0.0500		**< 0.0500**	mg/L	1	03/11/2016 9:45	117060
Tin	NELAP	0.0200		**< 0.0200**	mg/L	1	03/11/2016 9:45	117060
Vanadium	NELAP	0.0100		**0.0189**	mg/L	1	03/11/2016 9:45	117060
Zinc	NELAP	0.0100		**0.0870**	mg/L	1	03/11/2016 9:45	117060
MS QC limits for Mg are not applicable due to high sample/spike ratio.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	03/11/2016 11:19	117062
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,4-Trichlorobenzene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
2,4,5-Trichlorophenol	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
2,4,6-Trichlorophenol	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
2,4-Dichlorophenol	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
2,4-Dimethylphenol	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
2,4-Dinitrophenol	NELAP	0.020		**ND**	mg/L	1	03/10/2016 19:59	117024
2,4-Dinitrotoluene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
2,6-Dinitrotoluene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
2-Chloronaphthalene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
2-Chlorophenol	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
2-Methylnaphthalene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
2-Nitroaniline	NELAP	0.040		**ND**	mg/L	1	03/10/2016 19:59	117024
2-Nitrophenol	NELAP	0.020		**ND**	mg/L	1	03/10/2016 19:59	117024
3,3´-Dichlorobenzidine	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
3-Nitroaniline	NELAP	0.040		**ND**	mg/L	1	03/10/2016 19:59	117024
4,6-Dinitro-2-methylphenol	NELAP	0.020		**ND**	mg/L	1	03/10/2016 19:59	117024
4-Bromophenyl phenyl ether	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
4-Chloro-3-methylphenol	NELAP	0.020		**ND**	mg/L	1	03/10/2016 19:59	117024
4-Chloroaniline	NELAP	0.020		**ND**	mg/L	1	03/10/2016 19:59	117024
4-Chlorophenyl phenyl ether	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024

Laboratory Results

http://www.teklabinc.com/

Client: Missouri Geological Survey
Work Order: 16030645
Client Project: Appendix I & II
Report Date: 15-Mar-16
Lab ID: 16030645-001
Client Sample ID: PZ-103-SS
Matrix: GROUNDWATER
Collection Date: 03/08/2016 10:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
4-Nitroaniline	NELAP	0.020		**ND**	mg/L	1	03/10/2016 19:59	117024
4-Nitrophenol	NELAP	0.020		**ND**	mg/L	1	03/10/2016 19:59	117024
Acenaphthene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Acenaphthylene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Anthracene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Benzo(a)anthracene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Benzo(a)pyrene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Benzo(b)fluoranthene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Benzo(g,h,i)perylene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Benzo(k)fluoranthene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Benzyl alcohol	NELAP	0.020		**ND**	mg/L	1	03/10/2016 19:59	117024
Bis(2-chloroethoxy)methane	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Bis(2-chloroethyl)ether	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Bis(2-chloroisopropyl)ether	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Bis(2-ethylhexyl)phthalate	NELAP	0.006		**ND**	mg/L	1	03/10/2016 19:59	117024
Butyl benzyl phthalate	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Chrysene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Dibenzo(a,h)anthracene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Dibenzofuran	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Diethyl phthalate	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Dimethyl phthalate	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Di-n-butyl phthalate	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Di-n-octyl phthalate	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Fluoranthene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Fluorene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Hexachlorobenzene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Hexachlorocyclopentadiene	NELAP	0.020		**ND**	mg/L	1	03/10/2016 19:59	117024
Indeno(1,2,3-cd)pyrene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Isophorone	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
m,p-Cresol	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Naphthalene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Nitrobenzene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
N-Nitrosodimethylamine	NELAP	0.020		**ND**	mg/L	1	03/10/2016 19:59	117024
N-Nitroso-di-n-propylamine	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
N-Nitrosodiphenylamine	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
o-Cresol	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Pentachlorophenol	NELAP	0.020		**ND**	mg/L	1	03/10/2016 19:59	117024
Phenanthrene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Phenol	NELAP	0.005	J	**0.004**	mg/L	1	03/10/2016 19:59	117024
Pyrene	NELAP	0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
1,2-Diphenylhydrazine		0.010		**ND**	mg/L	1	03/10/2016 19:59	117024
Surr: 2,4,6-Tribromophenol		36.9-125		**78.6**	%REC	1	03/10/2016 19:59	117024
Surr: 2-Fluorobiphenyl		36.7-114		**79.8**	%REC	1	03/10/2016 19:59	117024
Surr: 2-Fluorophenol		23.9-78.3		**60.5**	%REC	1	03/10/2016 19:59	117024
Surr: Nitrobenzene-d5		49.9-124		**74.1**	%REC	1	03/10/2016 19:59	117024
Surr: Phenol-d5		14.1-51.6		**42.4**	%REC	1	03/10/2016 19:59	117024
Surr: p-Terphenyl-d14		41.6-133		**80.4**	%REC	1	03/10/2016 19:59	117024

Laboratory Results

http://www.teklabinc.com/

Client: Missouri Geological Survey
Work Order: 16030645
Client Project: Appendix I & II
Report Date: 15-Mar-16
Lab ID: 16030645-001
Client Sample ID: PZ-103-SS
Matrix: GROUNDWATER
Collection Date: 03/08/2016 10:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,1,1-Trichloroethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,1,2,2-Tetrachloroethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,1,2-Trichloroethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,1-Dichloroethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,1-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,1-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,2,3-Trichloropropane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,2-Dibromo-3-chloropropane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,2-Dibromoethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,2-Dichlorobenzene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,2-Dichloroethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,2-Dichloropropane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,3-Dichlorobenzene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,3-Dichloropropane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
1,4-Dichlorobenzene	NELAP	5.0		**6.4**	µg/L	1	03/10/2016 10:33	117046
2,2-Dichloropropane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
2-Butanone	NELAP	25.0		**ND**	µg/L	1	03/10/2016 10:33	117046
2-Hexanone	NELAP	25.0		**ND**	µg/L	1	03/10/2016 10:33	117046
4-Methyl-2-pentanone	NELAP	25.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Acetone	NELAP	25.0	J	**8.2**	µg/L	1	03/10/2016 10:33	117046
Acetonitrile	NELAP	50.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Acrolein	NELAP	100		**ND**	µg/L	1	03/10/2016 10:33	117046
Acrylonitrile	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Allyl chloride	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Benzene	NELAP	2.0		**88.0**	µg/L	1	03/10/2016 10:33	117046
Bromochloromethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Bromodichloromethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Bromoform	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Bromomethane	NELAP	10.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Carbon disulfide	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Carbon tetrachloride	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Chlorobenzene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Chloroethane	NELAP	10.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Chloroform	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Chloromethane	NELAP	10.0		**ND**	µg/L	1	03/10/2016 10:33	117046
cis-1,2-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
cis-1,3-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Dibromochloromethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Dibromomethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Dichlorodifluoromethane	NELAP	10.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Ethylbenzene	NELAP	5.0	J	**5.0**	µg/L	1	03/10/2016 10:33	117046
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Hexachloroethane	NELAP	10.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Iodomethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
m,p-Xylenes	NELAP	5.0	J	**2.1**	µg/L	1	03/10/2016 10:33	117046

Laboratory Results

http://www.teklabinc.com/

Client: Missouri Geological Survey
Work Order: 16030645
Client Project: Appendix I & II
Report Date: 15-Mar-16
Lab ID: 16030645-001
Client Sample ID: PZ-103-SS
Matrix: GROUNDWATER
Collection Date: 03/08/2016 10:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Methacrylonitrile	NELAP	10.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Methylene chloride	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Naphthalene	NELAP	10.0		**ND**	µg/L	1	03/10/2016 10:33	117046
o-Xylene	NELAP	5.0		**5.0**	µg/L	1	03/10/2016 10:33	117046
Propionitrile	NELAP	50.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Styrene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Tetrachloroethene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Toluene	NELAP	5.0		**12.9**	µg/L	1	03/10/2016 10:33	117046
trans-1,2-Dichloroethene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
trans-1,3-Dichloropropene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
trans-1,4-Dichloro-2-butene	NELAP	10.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Trichloroethene	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Vinyl acetate	NELAP	10.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	03/10/2016 10:33	117046
Xylenes, Total	NELAP	5.0		**7.1**	µg/L	1	03/10/2016 10:33	117046
Surr: 1,2-Dichloroethane-d4		74.7-129		**105.3**	%REC	1	03/10/2016 10:33	117046
Surr: 4-Bromofluorobenzene		86-119		**100.7**	%REC	1	03/10/2016 10:33	117046
Surr: Dibromofluoromethane		81.7-123		**93.6**	%REC	1	03/10/2016 10:33	117046
Surr: Toluene-d8		84.3-114		**98.3**	%REC	1	03/10/2016 10:33	117046

Sample Summary

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030645
Report Date: 15-Mar-16

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
16030645-001	PZ-103-SS	Groundwater	5	03/08/2016 10:15

Dates Report

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030645
Report Date: 15-Mar-16

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
16030645-001A	PZ-103-SS	03/08/2016 10:15	03/09/2016 16:03		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			03/10/2016 9:53	03/10/2016 19:59
16030645-001B	PZ-103-SS	03/08/2016 10:15	03/09/2016 16:03		
	SW-846 9036 (Total)				03/10/2016 23:32
16030645-001C	PZ-103-SS	03/08/2016 10:15	03/09/2016 16:03		
	SW-846 3005A, 6010B, Metals by ICP (Total)			03/10/2016 16:29	03/11/2016 9:45
	SW-846 7470A (Total)			03/10/2016 17:07	03/11/2016 11:19
16030645-001D	PZ-103-SS	03/08/2016 10:15	03/09/2016 16:03		
	SW-846 9060				03/11/2016 13:02
16030645-001E	PZ-103-SS	03/08/2016 10:15	03/09/2016 16:03		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				03/10/2016 10:33

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 9036 (TOTAL)

Batch R215839 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**< 10**						03/10/2016

Batch R215839 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10		**19**	20.00	0	92.6	90	110	03/10/2016

Batch R215839 **SampType:** MS Units **mg/L**
SampID: 16030645-001BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	10	S	**12**	10.00	6.370	53.0	85	115	03/10/2016

Batch R215839 **SampType:** MSD Units **mg/L** RPD Limit **10**
SampID: 16030645-001BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate	10	S	**12**	10.00	6.370	57.0	11.67	3.37	03/10/2016

SW-846 9060

Batch R215864 **SampType:** MBLK Units **mg/L**
SampID: ICB/MBLK

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	1.0		**< 1.0**						03/11/2016

Batch R215864 **SampType:** LCS Units **mg/L**
SampID: ICV/LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	10.0		**80.9**	77.60	0	104.2	90	110	03/11/2016

Batch R215864 **SampType:** MS Units **mg/L**
SampID: 16030645-001DMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Organic Carbon (TOC)	5.0		**30.6**	25.00	7.250	93.6	85	115	03/11/2016

Batch R215864 **SampType:** MSD Units **mg/L** RPD Limit **10**
SampID: 16030645-001DMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Organic Carbon (TOC)	5.0		**29.8**	25.00	7.250	90.0	30.65	2.95	03/11/2016

Quality Control Results

http://www.teklabinc.com/

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 117060 **SampType: MBLK** Units **mg/L**

SampID: MBLK-117060

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**< 0.0500**	0.05000	0	0	-100	100	03/11/2016
Arsenic	0.0250		**< 0.0250**	0.02500	0	0	-100	100	03/11/2016
Barium	0.0025		**< 0.0025**	0.00250	0	0	-100	100	03/11/2016
Beryllium	0.0005		**< 0.0005**	0.00050	0	0	-100	100	03/11/2016
Cadmium	0.0020		**< 0.0020**	0.00200	0	0	-100	100	03/11/2016
Chromium	0.0050		**< 0.0050**	0.00500	0	0	-100	100	03/11/2016
Cobalt	0.0050		**< 0.0050**	0.00500	0	0	-100	100	03/11/2016
Copper	0.0050		**< 0.0050**	0.00500	0	0	-100	100	03/11/2016
Lead	0.0150		**< 0.0150**	0.01500	0	0	-100	100	03/11/2016
Magnesium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	03/11/2016
Manganese	0.0030		**< 0.0030**	0.00300	0	0	-100	100	03/11/2016
Nickel	0.0050		**< 0.0050**	0.00500	0	0	-100	100	03/11/2016
Selenium	0.0400		**< 0.0400**	0.04000	0	0	-100	100	03/11/2016
Silver	0.0050		**< 0.0050**	0.00500	0	0	-100	100	03/11/2016
Thallium	0.0500		**< 0.0500**	0.05000	0	0	-100	100	03/11/2016
Tin	0.0200		**< 0.0200**	0.02000	0	0	-100	100	03/11/2016
Vanadium	0.0100		**< 0.0100**	0.01000	0	0	-100	100	03/11/2016
Zinc	0.0100	J	**0.0022**	0.01000	0	22.0	-100	100	03/11/2016

Batch 117060 **SampType: LCS** Units **mg/L**

SampID: LCS-117060

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**0.492**	0.5000	0	98.3	85	115	03/11/2016
Arsenic	0.0250		**0.497**	0.5000	0	99.4	85	115	03/11/2016
Barium	0.0025		**2.00**	2.000	0	100.0	85	115	03/11/2016
Beryllium	0.0005		**0.0502**	0.05000	0	100.4	85	115	03/11/2016
Cadmium	0.0020		**0.0504**	0.05000	0	100.8	85	115	03/11/2016
Chromium	0.0050		**0.198**	0.2000	0	99.2	85	115	03/11/2016
Cobalt	0.0050		**0.486**	0.5000	0	97.1	85	115	03/11/2016
Copper	0.0050		**0.237**	0.2500	0	94.6	85	115	03/11/2016
Lead	0.0150		**0.521**	0.5000	0	104.1	85	115	03/11/2016
Magnesium	0.0500		**2.50**	2.500	0	100.0	85	115	03/11/2016
Manganese	0.0030		**0.516**	0.5000	0	103.1	85	115	03/11/2016
Nickel	0.0050		**0.492**	0.5000	0	98.3	85	115	03/11/2016
Selenium	0.0400		**0.503**	0.5000	0	100.6	85	115	03/11/2016
Silver	0.0050		**0.0492**	0.05000	0	98.4	85	115	03/11/2016
Thallium	0.0500		**0.244**	0.2500	0	97.8	85	115	03/11/2016
Tin	0.0200		**0.494**	0.5000	0	98.9	85	115	03/11/2016
Vanadium	0.0100		**0.494**	0.5000	0	98.8	85	115	03/11/2016
Zinc	0.0100		**0.498**	0.5000	0	99.6	85	115	03/11/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 117060 **SampType: MS** Units **mg/L**

SampID: 16030645-001CMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony	0.0500		**0.477**	0.5000	0	95.4	75	125	03/11/2016
Arsenic	0.0250		**0.510**	0.5000	0	102.0	75	125	03/11/2016
Barium	0.0025		**2.69**	2.000	0.6939	100.0	75	125	03/11/2016
Beryllium	0.0005		**0.0503**	0.05000	0.0005000	99.6	75	125	03/11/2016
Cadmium	0.0020		**0.0501**	0.05000	0.0008000	98.6	75	125	03/11/2016
Chromium	0.0050		**0.210**	0.2000	0.01150	99.4	75	125	03/11/2016
Cobalt	0.0050		**0.482**	0.5000	0.003500	95.8	75	125	03/11/2016
Copper	0.0050		**0.250**	0.2500	0.006900	97.1	75	125	03/11/2016
Lead	0.0150		**0.516**	0.5000	0.004600	102.3	75	125	03/11/2016
Magnesium	0.0500	S	**95.6**	2.500	93.75	72.4	75	125	03/11/2016
Manganese	0.0030		**0.991**	0.5000	0.4842	101.4	75	125	03/11/2016
Nickel	0.0050		**0.502**	0.5000	0.01980	96.5	75	125	03/11/2016
Selenium	0.0400		**0.511**	0.5000	0	102.1	75	125	03/11/2016
Silver	0.0050		**0.0500**	0.05000	0	100.0	75	125	03/11/2016
Thallium	0.0500		**0.232**	0.2500	0	92.8	75	125	03/11/2016
Tin	0.0200		**0.487**	0.5000	0	97.5	75	125	03/11/2016
Vanadium	0.0100		**0.513**	0.5000	0.01890	98.8	75	125	03/11/2016
Zinc	0.0100		**0.558**	0.5000	0.08700	94.2	75	125	03/11/2016

Batch 117060 **SampType: MSD** Units **mg/L** RPD Limit **20**

SampID: 16030645-001CMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony	0.0500		**0.470**	0.5000	0	94.1	0.4771	1.41	03/11/2016
Arsenic	0.0250		**0.507**	0.5000	0	101.4	0.5101	0.59	03/11/2016
Barium	0.0025		**2.69**	2.000	0.6939	100.0	2.694	0.04	03/11/2016
Beryllium	0.0005		**0.0501**	0.05000	0.0005000	99.2	0.05030	0.40	03/11/2016
Cadmium	0.0020		**0.0500**	0.05000	0.0008000	98.4	0.05010	0.20	03/11/2016
Chromium	0.0050		**0.210**	0.2000	0.01150	99.2	0.2102	0.14	03/11/2016
Cobalt	0.0050		**0.479**	0.5000	0.003500	95.0	0.4824	0.77	03/11/2016
Copper	0.0050		**0.248**	0.2500	0.006900	96.5	0.2497	0.60	03/11/2016
Lead	0.0150		**0.512**	0.5000	0.004600	101.5	0.5163	0.86	03/11/2016
Magnesium	0.0500		**96.0**	2.500	93.75	92.0	95.56	0.51	03/11/2016
Manganese	0.0030		**0.992**	0.5000	0.4842	101.5	0.9914	0.05	03/11/2016
Nickel	0.0050		**0.500**	0.5000	0.01980	96.0	0.5023	0.50	03/11/2016
Selenium	0.0400		**0.512**	0.5000	0	102.5	0.5106	0.37	03/11/2016
Silver	0.0050		**0.0501**	0.05000	0	100.2	0.05000	0.20	03/11/2016
Thallium	0.0500		**0.236**	0.2500	0	94.4	0.2321	1.67	03/11/2016
Tin	0.0200		**0.487**	0.5000	0	97.3	0.4873	0.12	03/11/2016
Vanadium	0.0100		**0.511**	0.5000	0.01890	98.5	0.5129	0.31	03/11/2016
Zinc	0.0100		**0.557**	0.5000	0.08700	94.0	0.5581	0.22	03/11/2016

Quality Control Results

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030645
Report Date: 15-Mar-16

SW-846 7470A (TOTAL)

Batch 117062 **SampType: MBLK** Units **mg/L**
SampID: MBLK-117062

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**< 0.00020**	.000200	0	0	-100	100	03/11/2016

Batch 117062 **SampType: LCS** Units **mg/L**
SampID: LCS-117062

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**0.00477**	0.00500	0	95.4	85	115	03/11/2016

Batch 117062 **SampType: MS** Units **mg/L**
SampID: 16030645-001CMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury	0.00020		**0.00499**	0.00500	0	99.9	75	125	03/11/2016

Batch 117062 **SampType: MSD** Units **mg/L** RPD Limit **15**
SampID: 16030645-001CMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury	0.00020		**0.00488**	0.00500	0	97.6	0.004995	2.34	03/11/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **117024** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-117024

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**ND**						03/10/2016
2,4,5-Trichlorophenol	0.010		**ND**						03/10/2016
2,4,6-Trichlorophenol	0.010		**ND**						03/10/2016
2,4-Dichlorophenol	0.010		**ND**						03/10/2016
2,4-Dimethylphenol	0.010		**ND**						03/10/2016
2,4-Dinitrophenol	0.020		**ND**						03/10/2016
2,4-Dinitrotoluene	0.010		**ND**						03/10/2016
2,6-Dinitrotoluene	0.010		**ND**						03/10/2016
2-Chloronaphthalene	0.010		**ND**						03/10/2016
2-Chlorophenol	0.010		**ND**						03/10/2016
2-Methylnaphthalene	0.010		**ND**						03/10/2016
2-Nitroaniline	0.040		**ND**						03/10/2016
2-Nitrophenol	0.020		**ND**						03/10/2016
3,3´-Dichlorobenzidine	0.010		**ND**						03/10/2016
3-Nitroaniline	0.040		**ND**						03/10/2016
4,6-Dinitro-2-methylphenol	0.020		**ND**						03/10/2016
4-Bromophenyl phenyl ether	0.010		**ND**						03/10/2016
4-Chloro-3-methylphenol	0.020		**ND**						03/10/2016
4-Chloroaniline	0.020		**ND**						03/10/2016
4-Chlorophenyl phenyl ether	0.010		**ND**						03/10/2016
4-Nitroaniline	0.020		**ND**						03/10/2016
4-Nitrophenol	0.020		**ND**						03/10/2016
Acenaphthene	0.010		**ND**						03/10/2016
Acenaphthylene	0.010		**ND**						03/10/2016
Anthracene	0.010		**ND**						03/10/2016
Benzo(a)anthracene	0.010		**ND**						03/10/2016
Benzo(a)pyrene	0.010		**ND**						03/10/2016
Benzo(b)fluoranthene	0.010		**ND**						03/10/2016
Benzo(g,h,i)perylene	0.010		**ND**						03/10/2016
Benzo(k)fluoranthene	0.010		**ND**						03/10/2016
Benzyl alcohol	0.020		**ND**						03/10/2016
Bis(2-chloroethoxy)methane	0.010		**ND**						03/10/2016
Bis(2-chloroethyl)ether	0.010		**ND**						03/10/2016
Bis(2-chloroisopropyl)ether	0.010		**ND**						03/10/2016
Bis(2-ethylhexyl)phthalate	0.006		**ND**						03/10/2016
Butyl benzyl phthalate	0.010		**ND**						03/10/2016
Chrysene	0.010		**ND**						03/10/2016
Dibenzo(a,h)anthracene	0.010		**ND**						03/10/2016
Dibenzofuran	0.010		**ND**						03/10/2016
Diethyl phthalate	0.010		**ND**						03/10/2016
Dimethyl phthalate	0.010		**ND**						03/10/2016
Di-n-butyl phthalate	0.010		**ND**						03/10/2016
Di-n-octyl phthalate	0.010		**ND**						03/10/2016
Fluoranthene	0.010		**ND**						03/10/2016
Fluorene	0.010		**ND**						03/10/2016
Hexachlorobenzene	0.010		**ND**						03/10/2016
Hexachlorocyclopentadiene	0.020		**ND**						03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **117024** **SampType:** **MBLK** Units **mg/L**

SampID: MBLK-117024

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Indeno(1,2,3-cd)pyrene	0.010		**ND**						03/10/2016
Isophorone	0.010		**ND**						03/10/2016
m,p-Cresol	0.010		**ND**						03/10/2016
Naphthalene	0.010		**ND**						03/10/2016
Nitrobenzene	0.010		**ND**						03/10/2016
N-Nitrosodimethylamine	0.020		**ND**						03/10/2016
N-Nitroso-di-n-propylamine	0.010		**ND**						03/10/2016
N-Nitrosodiphenylamine	0.010		**ND**						03/10/2016
o-Cresol	0.010		**ND**						03/10/2016
Pentachlorophenol	0.020		**ND**						03/10/2016
Phenanthrene	0.010		**ND**						03/10/2016
Phenol	0.005		**ND**						03/10/2016
Pyrene	0.010		**ND**						03/10/2016
1,2-Diphenylhydrazine	0.010		**ND**						03/10/2016
Surr: 2,4,6-Tribromophenol			**0.029**	0.05000		58.5	48.9	120	03/10/2016
Surr: 2-Fluorobiphenyl			**0.018**	0.02500		72.1	51.1	102	03/10/2016
Surr: 2-Fluorophenol			**0.024**	0.05000		48.3	32	75.8	03/10/2016
Surr: Nitrobenzene-d5			**0.017**	0.02500		68.1	19.5	133	03/10/2016
Surr: Phenol-d5			**0.016**	0.05000		32.6	24.1	54.7	03/10/2016
Surr: p-Terphenyl-d14			**0.022**	0.02500		87.2	51.6	124	03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 117024 **SampType: LCS** Units **mg/L**

SampID: LCS-117024

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.040**	0.05000	0	79.8	42.3	104	03/10/2016
2,4,5-Trichlorophenol	0.010		**0.077**	0.1000	0	77.2	55	116	03/10/2016
2,4,6-Trichlorophenol	0.010		**0.075**	0.1000	0	75.1	52.3	109	03/10/2016
2,4-Dimethylphenol	0.010		**0.067**	0.1000	0	67.0	50	107	03/10/2016
2,4-Dinitrophenol	0.020		**0.059**	0.1000	0	59.2	5.78	112	03/10/2016
2,4-Dinitrotoluene	0.010		**0.045**	0.05000	0	90.9	58.7	119	03/10/2016
2-Chlorophenol	0.010		**0.069**	0.1000	0	69.3	44.4	94.7	03/10/2016
4-Chloro-3-methylphenol	0.020		**0.074**	0.1000	0	73.9	52.1	109	03/10/2016
4-Nitrophenol	0.020		**0.036**	0.1000	0	36.5	24.2	55.7	03/10/2016
Acenaphthene	0.010		**0.041**	0.05000	0	81.7	51.2	109	03/10/2016
Acenaphthylene	0.010		**0.045**	0.05000	0	90.9	54.8	117	03/10/2016
Anthracene	0.010		**0.042**	0.05000	0	83.4	56.1	116	03/10/2016
Benzo(a)anthracene	0.010		**0.041**	0.05000	0	82.8	55	113	03/10/2016
Benzo(a)pyrene	0.010		**0.045**	0.05000	0	89.8	60.4	126	03/10/2016
Benzo(b)fluoranthene	0.010		**0.042**	0.05000	0	84.7	57.6	119	03/10/2016
Benzo(g,h,i)perylene	0.010		**0.043**	0.05000	0	86.4	51.2	130	03/10/2016
Benzo(k)fluoranthene	0.010		**0.043**	0.05000	0	86.4	57.9	126	03/10/2016
Bis(2-ethylhexyl)phthalate	0.006		**0.045**	0.05000	0	90.4	52.8	122	03/10/2016
Chrysene	0.010		**0.044**	0.05000	0	87.3	57.9	120	03/10/2016
Dibenzo(a,h)anthracene	0.010		**0.043**	0.05000	0	86.8	54.7	130	03/10/2016
Diethyl phthalate	0.010		**0.091**	0.1000	0	90.8	54.3	116	03/10/2016
Dimethyl phthalate	0.010		**0.086**	0.1000	0	85.7	53.5	111	03/10/2016
Di-n-butyl phthalate	0.010		**0.042**	0.05000	0	83.6	50.8	116	03/10/2016
Fluoranthene	0.010		**0.043**	0.05000	0	85.9	56.9	117	03/10/2016
Fluorene	0.010		**0.044**	0.05000	0	88.1	55.1	112	03/10/2016
Hexachlorobenzene	0.010		**0.083**	0.1000	0	83.1	54.3	119	03/10/2016
Indeno(1,2,3-cd)pyrene	0.010		**0.045**	0.05000	0	90.5	56.2	135	03/10/2016
m,p-Cresol	0.010		**0.029**	0.05000	0	58.1	39.5	94	03/10/2016
Naphthalene	0.010		**0.037**	0.05000	0	74.6	40.3	98.1	03/10/2016
Nitrobenzene	0.010		**0.076**	0.1000	0	76.0	44.9	95.5	03/10/2016
N-Nitroso-di-n-propylamine	0.010		**0.042**	0.05000	0	83.8	49.2	107	03/10/2016
o-Cresol	0.010		**0.032**	0.05000	0	64.8	42.5	95	03/10/2016
Pentachlorophenol	0.020		**0.066**	0.1000	0	66.4	35.2	104	03/10/2016
Phenanthrene	0.010		**0.043**	0.05000	0	85.0	55.2	115	03/10/2016
Phenol	0.005		**0.035**	0.1000	0	34.5	22.7	51.8	03/10/2016
Pyrene	0.010		**0.044**	0.05000	0	87.9	56	116	03/10/2016
Surr: 2,4,6-Tribromophenol			**0.037**	0.05000		73.5	48.9	120	03/10/2016
Surr: 2-Fluorobiphenyl			**0.018**	0.02500		72.5	51.1	102	03/10/2016
Surr: 2-Fluorophenol			**0.022**	0.05000		44.6	32	75.8	03/10/2016
Surr: Nitrobenzene-d5			**0.024**	0.02500		97.2	19.5	133	03/10/2016
Surr: Phenol-d5			**0.017**	0.05000		33.5	24.1	54.7	03/10/2016
Surr: p-Terphenyl-d14			**0.023**	0.02500		90.2	51.6	124	03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **117024** **SampType:** **LCSD** Units **mg/L** RPD Limit **40**

SampID: LCSD-117024

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.041**	0.05000	0	81.1	0.03989	1.64	03/10/2016
2,4,5-Trichlorophenol	0.010		**0.076**	0.1000	0	75.5	0.07721	2.19	03/10/2016
2,4,6-Trichlorophenol	0.010		**0.074**	0.1000	0	74.5	0.07511	0.87	03/10/2016
2,4-Dimethylphenol	0.010		**0.064**	0.1000	0	64.4	0.06704	4.08	03/10/2016
2,4-Dinitrophenol	0.020		**0.055**	0.1000	0	55.3	0.05925	6.82	03/10/2016
2,4-Dinitrotoluene	0.010		**0.045**	0.05000	0	89.6	0.04547	1.44	03/10/2016
2-Chlorophenol	0.010		**0.068**	0.1000	0	67.6	0.06926	2.35	03/10/2016
4-Chloro-3-methylphenol	0.020		**0.073**	0.1000	0	73.1	0.07390	1.03	03/10/2016
4-Nitrophenol	0.020		**0.036**	0.1000	0	36.2	0.03645	0.77	03/10/2016
Acenaphthene	0.010		**0.040**	0.05000	0	80.9	0.04087	0.98	03/10/2016
Acenaphthylene	0.010		**0.044**	0.05000	0	88.4	0.04543	2.72	03/10/2016
Anthracene	0.010		**0.041**	0.05000	0	81.6	0.04169	2.13	03/10/2016
Benzo(a)anthracene	0.010		**0.039**	0.05000	0	78.7	0.04138	5.05	03/10/2016
Benzo(a)pyrene	0.010		**0.043**	0.05000	0	86.5	0.04488	3.68	03/10/2016
Benzo(b)fluoranthene	0.010		**0.042**	0.05000	0	83.6	0.04236	1.28	03/10/2016
Benzo(g,h,i)perylene	0.010		**0.043**	0.05000	0	85.2	0.04322	1.44	03/10/2016
Benzo(k)fluoranthene	0.010		**0.042**	0.05000	0	84.2	0.04322	2.65	03/10/2016
Bis(2-ethylhexyl)phthalate	0.006		**0.043**	0.05000	0	85.5	0.04521	5.57	03/10/2016
Chrysene	0.010		**0.042**	0.05000	0	84.0	0.04366	3.88	03/10/2016
Dibenzo(a,h)anthracene	0.010		**0.042**	0.05000	0	84.4	0.04340	2.78	03/10/2016
Diethyl phthalate	0.010		**0.086**	0.1000	0	86.4	0.09082	4.94	03/10/2016
Dimethyl phthalate	0.010		**0.082**	0.1000	0	82.2	0.08567	4.10	03/10/2016
Di-n-butyl phthalate	0.010		**0.040**	0.05000	0	79.1	0.04180	5.53	03/10/2016
Fluoranthene	0.010		**0.041**	0.05000	0	81.5	0.04295	5.31	03/10/2016
Fluorene	0.010		**0.042**	0.05000	0	84.2	0.04407	4.55	03/10/2016
Hexachlorobenzene	0.010		**0.080**	0.1000	0	80.3	0.08306	3.42	03/10/2016
Indeno(1,2,3-cd)pyrene	0.010		**0.045**	0.05000	0	90.0	0.04525	0.60	03/10/2016
m,p-Cresol	0.010		**0.028**	0.05000	0	55.8	0.02906	4.14	03/10/2016
Naphthalene	0.010		**0.036**	0.05000	0	72.5	0.03728	2.75	03/10/2016
Nitrobenzene	0.010		**0.074**	0.1000	0	73.8	0.07595	2.91	03/10/2016
N-Nitroso-di-n-propylamine	0.010		**0.041**	0.05000	0	81.3	0.04188	2.93	03/10/2016
o-Cresol	0.010		**0.032**	0.05000	0	63.3	0.03241	2.40	03/10/2016
Pentachlorophenol	0.020		**0.064**	0.1000	0	63.9	0.06639	3.79	03/10/2016
Phenanthrene	0.010		**0.042**	0.05000	0	83.1	0.04252	2.31	03/10/2016
Phenol	0.005		**0.036**	0.1000	0	36.5	0.03453	5.41	03/10/2016
Pyrene	0.010		**0.042**	0.05000	0	84.4	0.04396	4.06	03/10/2016
Surr: 2,4,6-Tribromophenol			**0.035**	0.05000		70.2			03/10/2016
Surr: 2-Fluorobiphenyl			**0.018**	0.02500		73.4			03/10/2016
Surr: 2-Fluorophenol			**0.023**	0.05000		45.4			03/10/2016
Surr: Nitrobenzene-d5			**0.024**	0.02500		95.2			03/10/2016
Surr: Phenol-d5			**0.017**	0.05000		33.8			03/10/2016
Surr: p-Terphenyl-d14			**0.021**	0.02500		83.2			03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **117024** **SampType:** **MS** Units **mg/L**

SampID: 16030645-001AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.040**	0.05000	0	80.1	33	98.5	03/10/2016
2,4,5-Trichlorophenol	0.010		**0.077**	0.1000	0	77.2	38.6	123	03/10/2016
2,4,6-Trichlorophenol	0.010		**0.081**	0.1000	0	81.4	35.9	123	03/10/2016
2,4-Dimethylphenol	0.010		**0.069**	0.1000	0	69.0	38.3	88	03/10/2016
2,4-Dinitrophenol	0.020		**0.076**	0.1000	0	75.8	1.88	162	03/10/2016
2,4-Dinitrotoluene	0.010		**0.044**	0.05000	0	88.0	60	108	03/10/2016
2-Chlorophenol	0.010		**0.070**	0.1000	0	70.5	44.9	105	03/10/2016
4-Chloro-3-methylphenol	0.020		**0.076**	0.1000	0	76.1	54.7	112	03/10/2016
4-Nitrophenol	0.020		**0.043**	0.1000	0	42.6	17.7	51.5	03/10/2016
Acenaphthene	0.010		**0.040**	0.05000	0	80.2	55.8	108	03/10/2016
Acenaphthylene	0.010		**0.044**	0.05000	0	88.9	53.5	102	03/10/2016
Anthracene	0.010		**0.040**	0.05000	0	80.5	52.8	105	03/10/2016
Benzo(a)anthracene	0.010		**0.041**	0.05000	0	81.2	61.8	100	03/10/2016
Benzo(a)pyrene	0.010		**0.043**	0.05000	0	85.4	59.2	104	03/10/2016
Benzo(b)fluoranthene	0.010		**0.042**	0.05000	0	83.5	50.6	105	03/10/2016
Benzo(g,h,i)perylene	0.010		**0.043**	0.05000	0	86.6	47.1	112	03/10/2016
Benzo(k)fluoranthene	0.010		**0.042**	0.05000	0	84.9	50.3	123	03/10/2016
Bis(2-ethylhexyl)phthalate	0.006		**0.043**	0.05000	0	85.3	56.3	109	03/10/2016
Chrysene	0.010		**0.042**	0.05000	0	84.6	58.8	106	03/10/2016
Dibenzo(a,h)anthracene	0.010		**0.043**	0.05000	0	86.0	54.7	107	03/10/2016
Diethyl phthalate	0.010		**0.086**	0.1000	0	86.2	51.7	106	03/10/2016
Dimethyl phthalate	0.010		**0.081**	0.1000	0	81.2	58.8	104	03/10/2016
Di-n-butyl phthalate	0.010		**0.040**	0.05000	0	79.5	54.3	105	03/10/2016
Fluoranthene	0.010		**0.041**	0.05000	0	82.2	58.5	103	03/10/2016
Fluorene	0.010		**0.042**	0.05000	0	84.3	49.1	105	03/10/2016
Hexachlorobenzene	0.010		**0.082**	0.1000	0	82.0	55.9	106	03/10/2016
Indeno(1,2,3-cd)pyrene	0.010		**0.046**	0.05000	0	91.1	54.5	107	03/10/2016
m,p-Cresol	0.010		**0.030**	0.05000	0	60.2	37.6	93.7	03/10/2016
Naphthalene	0.010		**0.038**	0.05000	0	75.1	50.9	92.3	03/10/2016
Nitrobenzene	0.010		**0.072**	0.1000	0	71.6	51.8	104	03/10/2016
N-Nitroso-di-n-propylamine	0.010		**0.041**	0.05000	0	82.5	50.8	109	03/10/2016
o-Cresol	0.010		**0.034**	0.05000	0	68.4	43	101	03/10/2016
Pentachlorophenol	0.020		**0.071**	0.1000	0	71.3	26.8	134	03/10/2016
Phenanthrene	0.010		**0.041**	0.05000	0	81.3	49.6	107	03/10/2016
Phenol	0.005		**0.042**	0.1000	0.003740	37.8	17.7	45.8	03/10/2016
Pyrene	0.010		**0.043**	0.05000	0	85.9	61.3	108	03/10/2016
Surr: 2,4,6-Tribromophenol			**0.037**	0.05000		73.6	26.4	130	03/10/2016
Surr: 2-Fluorobiphenyl			**0.018**	0.02500		72.9	38.3	115	03/10/2016
Surr: 2-Fluorophenol			**0.025**	0.05000		51.0	16.5	65	03/10/2016
Surr: Nitrobenzene-d5			**0.023**	0.02500		93.5	47.6	107	03/10/2016
Surr: Phenol-d5			**0.018**	0.05000		36.9	9.94	41.7	03/10/2016
Surr: p-Terphenyl-d14			**0.016**	0.02500		64.6	1	136	03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **117024** **SampType:** **MSD** Units **mg/L** RPD Limit **40**

SampID: 16030645-001AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,2,4-Trichlorobenzene	0.010		**0.039**	0.05000	0	78.0	0.04003	2.58	03/10/2016
2,4,5-Trichlorophenol	0.010		**0.081**	0.1000	0	80.6	0.07716	4.35	03/10/2016
2,4,6-Trichlorophenol	0.010		**0.082**	0.1000	0	82.4	0.08144	1.21	03/10/2016
2,4-Dimethylphenol	0.010		**0.071**	0.1000	0	71.4	0.06895	3.49	03/10/2016
2,4-Dinitrophenol	0.020		**0.075**	0.1000	0	74.9	0.07578	1.18	03/10/2016
2,4-Dinitrotoluene	0.010		**0.046**	0.05000	0	92.4	0.04399	4.88	03/10/2016
2-Chlorophenol	0.010		**0.075**	0.1000	0	75.1	0.07045	6.35	03/10/2016
4-Chloro-3-methylphenol	0.020		**0.079**	0.1000	0	78.9	0.07611	3.65	03/10/2016
4-Nitrophenol	0.020		**0.045**	0.1000	0	45.2	0.04261	5.94	03/10/2016
Acenaphthene	0.010		**0.041**	0.05000	0	82.8	0.04011	3.21	03/10/2016
Acenaphthylene	0.010		**0.046**	0.05000	0	91.2	0.04443	2.58	03/10/2016
Anthracene	0.010		**0.042**	0.05000	0	83.2	0.04027	3.27	03/10/2016
Benzo(a)anthracene	0.010		**0.040**	0.05000	0	79.5	0.04062	2.19	03/10/2016
Benzo(a)pyrene	0.010		**0.042**	0.05000	0	84.8	0.04268	0.66	03/10/2016
Benzo(b)fluoranthene	0.010		**0.041**	0.05000	0	82.7	0.04173	0.87	03/10/2016
Benzo(g,h,i)perylene	0.010		**0.043**	0.05000	0	85.2	0.04328	1.58	03/10/2016
Benzo(k)fluoranthene	0.010		**0.042**	0.05000	0	83.5	0.04244	1.59	03/10/2016
Bis(2-ethylhexyl)phthalate	0.006		**0.045**	0.05000	0	89.8	0.04263	5.23	03/10/2016
Chrysene	0.010		**0.043**	0.05000	0	86.7	0.04232	2.36	03/10/2016
Dibenzo(a,h)anthracene	0.010		**0.042**	0.05000	0	84.0	0.04300	2.35	03/10/2016
Diethyl phthalate	0.010		**0.089**	0.1000	0	89.5	0.08618	3.73	03/10/2016
Dimethyl phthalate	0.010		**0.082**	0.1000	0	82.4	0.08124	1.44	03/10/2016
Di-n-butyl phthalate	0.010		**0.041**	0.05000	0	81.5	0.03974	2.49	03/10/2016
Fluoranthene	0.010		**0.041**	0.05000	0	82.8	0.04109	0.75	03/10/2016
Fluorene	0.010		**0.043**	0.05000	0	86.3	0.04216	2.34	03/10/2016
Hexachlorobenzene	0.010		**0.083**	0.1000	0	82.9	0.08199	1.10	03/10/2016
Indeno(1,2,3-cd)pyrene	0.010		**0.044**	0.05000	0	87.4	0.04557	4.17	03/10/2016
m,p-Cresol	0.010		**0.033**	0.05000	0	66.7	0.03008	10.37	03/10/2016
Naphthalene	0.010		**0.037**	0.05000	0	74.2	0.03753	1.10	03/10/2016
Nitrobenzene	0.010		**0.076**	0.1000	0	76.1	0.07162	6.10	03/10/2016
N-Nitroso-di-n-propylamine	0.010		**0.043**	0.05000	0	85.4	0.04125	3.41	03/10/2016
o-Cresol	0.010		**0.036**	0.05000	0	72.1	0.03418	5.35	03/10/2016
Pentachlorophenol	0.020		**0.072**	0.1000	0	72.0	0.07131	0.92	03/10/2016
Phenanthrene	0.010		**0.042**	0.05000	0	84.4	0.04066	3.69	03/10/2016
Phenol	0.005		**0.044**	0.1000	0.003740	40.7	0.04150	6.86	03/10/2016
Pyrene	0.010		**0.043**	0.05000	0	86.7	0.04293	0.95	03/10/2016
Surr: 2,4,6-Tribromophenol			**0.038**	0.05000		76.5			03/10/2016
Surr: 2-Fluorobiphenyl			**0.018**	0.02500		71.9			03/10/2016
Surr: 2-Fluorophenol			**0.028**	0.05000		55.6			03/10/2016
Surr: Nitrobenzene-d5			**0.024**	0.02500		97.1			03/10/2016
Surr: Phenol-d5			**0.020**	0.05000		39.4			03/10/2016
Surr: p-Terphenyl-d14			**0.015**	0.02500		61.9			03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **117046** **SampType:** **MBLK** Units **µg/L**

SampID: MBLK-T160310-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**ND**						03/10/2016
1,1,1-Trichloroethane	5.0		**ND**						03/10/2016
1,1,2,2-Tetrachloroethane	5.0		**ND**						03/10/2016
1,1,2-Trichloroethane	5.0		**ND**						03/10/2016
1,1-Dichloroethane	5.0		**ND**						03/10/2016
1,1-Dichloroethene	5.0		**ND**						03/10/2016
1,1-Dichloropropene	5.0		**ND**						03/10/2016
1,2,3-Trichloropropane	5.0		**ND**						03/10/2016
1,2-Dibromo-3-chloropropane	5.0		**ND**						03/10/2016
1,2-Dibromoethane	5.0		**ND**						03/10/2016
1,2-Dichlorobenzene	5.0		**ND**						03/10/2016
1,2-Dichloroethane	5.0		**ND**						03/10/2016
1,2-Dichloropropane	5.0		**ND**						03/10/2016
1,3-Dichlorobenzene	5.0		**ND**						03/10/2016
1,3-Dichloropropane	5.0		**ND**						03/10/2016
1,4-Dichlorobenzene	5.0		**ND**						03/10/2016
2,2-Dichloropropane	5.0		**ND**						03/10/2016
2-Butanone	25.0		**ND**						03/10/2016
2-Hexanone	25.0		**ND**						03/10/2016
4-Methyl-2-pentanone	25.0		**ND**						03/10/2016
Acetone	25.0		**ND**						03/10/2016
Acetonitrile	50.0		**ND**						03/10/2016
Acrolein	100		**ND**						03/10/2016
Acrylonitrile	5.0		**ND**						03/10/2016
Allyl chloride	5.0		**ND**						03/10/2016
Benzene	2.0		**ND**						03/10/2016
Bromochloromethane	5.0		**ND**						03/10/2016
Bromodichloromethane	5.0		**ND**						03/10/2016
Bromoform	5.0		**ND**						03/10/2016
Bromomethane	10.0		**ND**						03/10/2016
Carbon disulfide	5.0		**ND**						03/10/2016
Carbon tetrachloride	5.0		**ND**						03/10/2016
Chlorobenzene	5.0		**ND**						03/10/2016
Chloroethane	10.0		**ND**						03/10/2016
Chloroform	5.0		**ND**						03/10/2016
Chloromethane	10.0		**ND**						03/10/2016
cis-1,2-Dichloroethene	5.0		**ND**						03/10/2016
cis-1,3-Dichloropropene	5.0		**ND**						03/10/2016
Dibromochloromethane	5.0		**ND**						03/10/2016
Dibromomethane	5.0		**ND**						03/10/2016
Dichlorodifluoromethane	10.0		**ND**						03/10/2016
Ethyl methacrylate	5.0		**ND**						03/10/2016
Ethylbenzene	5.0		**ND**						03/10/2016
Hexachlorobutadiene	5.0		**ND**						03/10/2016
Hexachloroethane	10.0		**ND**						03/10/2016
Iodomethane	5.0		**ND**						03/10/2016
m,p-Xylenes	5.0		**ND**						03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **117046** **SampType:** **MBLK** Units **µg/L**

SampID: MBLK-T160310-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methacrylonitrile	10.0		**ND**						03/10/2016
Methyl Methacrylate	5.0		**ND**						03/10/2016
Methylene chloride	5.0		**ND**						03/10/2016
Naphthalene	10.0		**ND**						03/10/2016
o-Xylene	5.0		**ND**						03/10/2016
Propionitrile	50.0		**ND**						03/10/2016
Styrene	5.0		**ND**						03/10/2016
Tetrachloroethene	5.0		**ND**						03/10/2016
Toluene	5.0		**ND**						03/10/2016
trans-1,2-Dichloroethene	5.0		**ND**						03/10/2016
trans-1,3-Dichloropropene	5.0		**ND**						03/10/2016
trans-1,4-Dichloro-2-butene	10.0		**ND**						03/10/2016
Trichloroethene	5.0		**ND**						03/10/2016
Trichlorofluoromethane	5.0		**ND**						03/10/2016
Vinyl acetate	10.0		**ND**						03/10/2016
Vinyl chloride	2.0		**ND**						03/10/2016
Xylenes, Total	5.0		**ND**						03/10/2016
Surr: 1,2-Dichloroethane-d4			**50.2**	50.00		100.5	74.7	129	03/10/2016
Surr: 4-Bromofluorobenzene			**50.6**	50.00		101.2	86	119	03/10/2016
Surr: Dibromofluoromethane			**46.7**	50.00		93.5	81.7	123	03/10/2016
Surr: Toluene-d8			**49.5**	50.00		99.0	84.3	114	03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **117046** **SampType:** **LCSD** Units **µg/L** RPD Limit **40**

SampID: LCSD-T160310-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**51.8**	50.00	0	103.7	51.27	1.11	03/10/2016
1,1,1-Trichloroethane	5.0		**49.7**	50.00	0	99.4	48.19	3.09	03/10/2016
1,1,2,2-Tetrachloroethane	5.0		**47.7**	50.00	0	95.4	46.38	2.83	03/10/2016
1,1,2-Trichloroethane	5.0		**50.1**	50.00	0	100.3	50.01	0.26	03/10/2016
1,1-Dichloroethane	5.0		**52.8**	50.00	0	105.7	52.02	1.56	03/10/2016
1,1-Dichloroethene	5.0		**48.2**	50.00	0	96.4	47.15	2.24	03/10/2016
1,1-Dichloropropene	5.0		**48.8**	50.00	0	97.5	47.65	2.28	03/10/2016
1,2,3-Trichloropropane	5.0		**44.7**	50.00	0	89.4	42.77	4.37	03/10/2016
1,2-Dibromo-3-chloropropane	5.0		**40.8**	50.00	0	81.6	38.48	5.83	03/10/2016
1,2-Dibromoethane	5.0		**50.2**	50.00	0	100.4	49.19	1.99	03/10/2016
1,2-Dichlorobenzene	5.0		**46.1**	50.00	0	92.2	45.74	0.78	03/10/2016
1,2-Dichloroethane	5.0		**49.3**	50.00	0	98.6	49.71	0.87	03/10/2016
1,2-Dichloropropane	5.0		**49.2**	50.00	0	98.4	49.06	0.33	03/10/2016
1,3-Dichlorobenzene	5.0		**48.2**	50.00	0	96.3	47.00	2.44	03/10/2016
1,3-Dichloropropane	5.0		**49.2**	50.00	0	98.4	48.56	1.27	03/10/2016
1,4-Dichlorobenzene	5.0		**47.3**	50.00	0	94.6	46.83	1.02	03/10/2016
2,2-Dichloropropane	5.0		**53.0**	50.00	0	106.0	51.98	1.91	03/10/2016
2-Butanone	25.0		**107**	125.0	0	85.3	102.2	4.21	03/10/2016
2-Hexanone	25.0		**114**	125.0	0	91.4	108.7	4.94	03/10/2016
4-Methyl-2-pentanone	25.0		**114**	125.0	0	91.5	108.7	5.08	03/10/2016
Acetone	25.0		**111**	125.0	0	89.0	112.1	0.67	03/10/2016
Acetonitrile	50.0		**445**	500.0	0	89.0	416.2	6.63	03/10/2016
Acrolein	100		**438**	500.0	0	87.7	417.8	4.84	03/10/2016
Acrylonitrile	5.0		**49.4**	50.00	0	98.7	46.76	5.39	03/10/2016
Allyl chloride	5.0		**53.5**	50.00	0	107.0	52.25	2.36	03/10/2016
Benzene	2.0		**48.7**	50.00	0	97.4	47.63	2.26	03/10/2016
Bromochloromethane	5.0		**51.1**	50.00	0	102.2	51.23	0.29	03/10/2016
Bromodichloromethane	5.0		**50.8**	50.00	0	101.5	49.94	1.61	03/10/2016
Bromoform	5.0		**50.6**	50.00	0	101.2	49.27	2.64	03/10/2016
Bromomethane	10.0		**42.7**	50.00	0	85.4	42.34	0.89	03/10/2016
Carbon disulfide	5.0		**46.7**	50.00	0	93.3	45.58	2.36	03/10/2016
Carbon tetrachloride	5.0		**50.0**	50.00	0	100.1	47.97	4.24	03/10/2016
Chlorobenzene	5.0		**48.7**	50.00	0	97.5	48.12	1.26	03/10/2016
Chloroethane	10.0		**45.4**	50.00	0	90.8	44.19	2.72	03/10/2016
Chloroform	5.0		**48.7**	50.00	0	97.4	47.87	1.76	03/10/2016
Chloromethane	10.0		**48.5**	50.00	0	96.9	48.82	0.72	03/10/2016
cis-1,2-Dichloroethene	5.0		**50.1**	50.00	0	100.3	49.58	1.10	03/10/2016
cis-1,3-Dichloropropene	5.0		**51.6**	50.00	0	103.3	51.13	0.97	03/10/2016
Dibromochloromethane	5.0		**52.4**	50.00	0	104.8	52.22	0.38	03/10/2016
Dibromomethane	5.0		**47.4**	50.00	0	94.7	46.96	0.83	03/10/2016
Dichlorodifluoromethane	10.0		**48.6**	50.00	0	97.2	48.29	0.68	03/10/2016
Ethyl methacrylate	5.0		**51.9**	50.00	0	103.7	51.25	1.18	03/10/2016
Ethylbenzene	5.0		**49.2**	50.00	0	98.4	48.27	1.89	03/10/2016
Hexachlorobutadiene	5.0		**45.6**	50.00	0	91.2	44.49	2.51	03/10/2016
Hexachloroethane	10.0		**48.2**	50.00	0	96.3	47.02	2.42	03/10/2016
Iodomethane	5.0		**49.8**	50.00	0	99.5	51.49	3.40	03/10/2016
m,p-Xylenes	5.0		**103**	100.0	0	102.8	101.2	1.55	03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **117046** **SampType:** **LCSD** Units **µg/L** RPD Limit **40**

SampID: LCSD-T160310-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methacrylonitrile	10.0		**46.7**	50.00	0	93.4	43.82	6.38	03/10/2016
Methyl Methacrylate	5.0		**50.2**	50.00	0	100.4	48.58	3.32	03/10/2016
Methylene chloride	5.0		**49.0**	50.00	0	98.0	48.88	0.20	03/10/2016
Naphthalene	10.0		**45.3**	50.00	0	90.7	43.64	3.82	03/10/2016
o-Xylene	5.0		**49.6**	50.00	0	99.3	48.95	1.42	03/10/2016
Propionitrile	50.0		**427**	500.0	0	85.3	399.6	6.54	03/10/2016
Styrene	5.0		**54.2**	50.00	0	108.3	53.79	0.67	03/10/2016
Tetrachloroethene	5.0		**49.6**	50.00	0	99.2	48.38	2.53	03/10/2016
Toluene	5.0		**48.7**	50.00	0	97.3	47.84	1.72	03/10/2016
trans-1,2-Dichloroethene	5.0		**50.2**	50.00	0	100.4	49.59	1.24	03/10/2016
trans-1,3-Dichloropropene	5.0		**53.0**	50.00	0	106.0	52.75	0.47	03/10/2016
trans-1,4-Dichloro-2-butene	10.0		**49.5**	50.00	0	99.1	48.48	2.14	03/10/2016
Trichloroethene	5.0		**47.6**	50.00	0	95.3	46.66	2.06	03/10/2016
Trichlorofluoromethane	5.0		**49.3**	50.00	0	98.5	47.95	2.72	03/10/2016
Vinyl acetate	10.0		**55.0**	50.00	0	110.0	52.99	3.69	03/10/2016
Vinyl chloride	2.0		**47.7**	50.00	0	95.4	48.06	0.79	03/10/2016
Xylenes, Total	5.0		**152**	150.0	0	101.6	150.2	1.51	03/10/2016
Surr: 1,2-Dichloroethane-d4			**51.2**	50.00		102.4			03/10/2016
Surr: 4-Bromofluorobenzene			**50.3**	50.00		100.6			03/10/2016
Surr: Dibromofluoromethane			**48.0**	50.00		95.9			03/10/2016
Surr: Toluene-d8			**50.1**	50.00		100.2			03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch **117046** **SampType:** **LCS** Units **µg/L**

SampID: LCS-T160310-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	5.0		**51.3**	50.00	0	102.5	81.9	115	03/10/2016
1,1,1-Trichloroethane	5.0		**48.2**	50.00	0	96.4	79.4	124	03/10/2016
1,1,2,2-Tetrachloroethane	5.0		**46.4**	50.00	0	92.8	74.7	116	03/10/2016
1,1,2-Trichloroethane	5.0		**50.0**	50.00	0	100.0	80.8	111	03/10/2016
1,1-Dichloroethane	5.0		**52.0**	50.00	0	104.0	79.4	114	03/10/2016
1,1-Dichloroethene	5.0		**47.2**	50.00	0	94.3	74.1	117	03/10/2016
1,1-Dichloropropene	5.0		**47.6**	50.00	0	95.3	81.7	116	03/10/2016
1,2,3-Trichloropropane	5.0		**42.8**	50.00	0	85.5	77.3	112	03/10/2016
1,2-Dibromo-3-chloropropane	5.0		**38.5**	50.00	0	77.0	76	122	03/10/2016
1,2-Dibromoethane	5.0		**49.2**	50.00	0	98.4	80.8	114	03/10/2016
1,2-Dichlorobenzene	5.0		**45.7**	50.00	0	91.5	78.3	112	03/10/2016
1,2-Dichloroethane	5.0		**49.7**	50.00	0	99.4	70.6	118	03/10/2016
1,2-Dichloropropane	5.0		**49.1**	50.00	0	98.1	79.6	113	03/10/2016
1,3-Dichlorobenzene	5.0		**47.0**	50.00	0	94.0	78.6	117	03/10/2016
1,3-Dichloropropane	5.0		**48.6**	50.00	0	97.1	78.8	112	03/10/2016
1,4-Dichlorobenzene	5.0		**46.8**	50.00	0	93.7	77.8	114	03/10/2016
2,2-Dichloropropane	5.0		**52.0**	50.00	0	104.0	74.9	130	03/10/2016
2-Butanone	25.0		**102**	125.0	0	81.8	70.7	136	03/10/2016
2-Hexanone	25.0		**109**	125.0	0	87.0	73.3	125	03/10/2016
4-Methyl-2-pentanone	25.0		**109**	125.0	0	87.0	76.3	122	03/10/2016
Acetone	25.0		**112**	125.0	0	89.6	56.4	147	03/10/2016
Acetonitrile	50.0		**416**	500.0	0	83.2	59.3	129	03/10/2016
Acrolein	100		**418**	500.0	0	83.6	1	201	03/10/2016
Acrylonitrile	5.0		**46.8**	50.00	0	93.5	74.1	128	03/10/2016
Allyl chloride	5.0		**52.2**	50.00	0	104.5	71.5	123	03/10/2016
Benzene	2.0		**47.6**	50.00	0	95.3	80	114	03/10/2016
Bromochloromethane	5.0		**51.2**	50.00	0	102.5	73.3	121	03/10/2016
Bromodichloromethane	5.0		**49.9**	50.00	0	99.9	81.6	121	03/10/2016
Bromoform	5.0		**49.3**	50.00	0	98.5	83.1	127	03/10/2016
Bromomethane	10.0		**42.3**	50.00	0	84.7	44.4	154	03/10/2016
Carbon disulfide	5.0		**45.6**	50.00	0	91.2	73.2	118	03/10/2016
Carbon tetrachloride	5.0		**48.0**	50.00	0	95.9	79.4	130	03/10/2016
Chlorobenzene	5.0		**48.1**	50.00	0	96.2	81.4	110	03/10/2016
Chloroethane	10.0		**44.2**	50.00	0	88.4	52.1	137	03/10/2016
Chloroform	5.0		**47.9**	50.00	0	95.7	82.7	116	03/10/2016
Chloromethane	10.0		**48.8**	50.00	0	97.6	48.2	144	03/10/2016
cis-1,2-Dichloroethene	5.0		**49.6**	50.00	0	99.2	78.2	116	03/10/2016
cis-1,3-Dichloropropene	5.0		**51.1**	50.00	0	102.3	83	119	03/10/2016
Dibromochloromethane	5.0		**52.2**	50.00	0	104.4	81.2	121	03/10/2016
Dibromomethane	5.0		**47.0**	50.00	0	93.9	78.3	118	03/10/2016
Dichlorodifluoromethane	10.0		**48.3**	50.00	0	96.6	20.6	154	03/10/2016
Ethyl methacrylate	5.0		**51.2**	50.00	0	102.5	80.1	113	03/10/2016
Ethylbenzene	5.0		**48.3**	50.00	0	96.5	77.2	113	03/10/2016
Hexachlorobutadiene	5.0		**44.5**	50.00	0	89.0	77.3	123	03/10/2016
Hexachloroethane	10.0		**47.0**	50.00	0	94.0	74.6	117	03/10/2016
Iodomethane	5.0		**51.5**	50.00	0	103.0	61.3	140	03/10/2016
m,p-Xylenes	5.0		**101**	100.0	0	101.2	79.6	113	03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 117046 **SampType: LCS** Units **µg/L**

SampID: LCS-T160310-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methacrylonitrile	10.0		**43.8**	50.00	0	87.6	77.2	125	03/10/2016
Methyl Methacrylate	5.0		**48.6**	50.00	0	97.2	74.2	121	03/10/2016
Methylene chloride	5.0		**48.9**	50.00	0	97.8	74.1	114	03/10/2016
Naphthalene	10.0		**43.6**	50.00	0	87.3	77.9	122	03/10/2016
o-Xylene	5.0		**49.0**	50.00	0	97.9	80.1	111	03/10/2016
Propionitrile	50.0		**400**	500.0	0	79.9	72.9	137	03/10/2016
Styrene	5.0		**53.8**	50.00	0	107.6	83.4	113	03/10/2016
Tetrachloroethene	5.0		**48.4**	50.00	0	96.8	72.5	125	03/10/2016
Toluene	5.0		**47.8**	50.00	0	95.7	77.5	113	03/10/2016
trans-1,2-Dichloroethene	5.0		**49.6**	50.00	0	99.2	79	114	03/10/2016
trans-1,3-Dichloropropene	5.0		**52.8**	50.00	0	105.5	78	115	03/10/2016
trans-1,4-Dichloro-2-butene	10.0		**48.5**	50.00	0	97.0	63.3	128	03/10/2016
Trichloroethene	5.0		**46.7**	50.00	0	93.3	84.4	114	03/10/2016
Trichlorofluoromethane	5.0		**48.0**	50.00	0	95.9	75.2	132	03/10/2016
Vinyl acetate	10.0		**53.0**	50.00	0	106.0	64.5	127	03/10/2016
Vinyl chloride	2.0		**48.1**	50.00	0	96.1	58	134	03/10/2016
Xylenes, Total	5.0		**150**	150.0	0	100.1	80.1	111	03/10/2016
Surr: 1,2-Dichloroethane-d4			**51.6**	50.00		103.3	74.7	129	03/10/2016
Surr: 4-Bromofluorobenzene			**50.3**	50.00		100.6	86	119	03/10/2016
Surr: Dibromofluoromethane			**47.8**	50.00		95.6	81.7	123	03/10/2016
Surr: Toluene-d8			**50.0**	50.00		100.0	84.1	114	03/10/2016

Batch 117046 **SampType: MS** Units **µg/L**

SampID: 16030645-001EMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1-Dichloroethene	5.0		**43.6**	50.00	0	87.1	35.7	136	03/10/2016
Benzene	2.0		**125**	50.00	88.05	73.4	62.5	121	03/10/2016
Chlorobenzene	5.0		**44.6**	50.00	0	89.1	78.6	114	03/10/2016
Ethylbenzene	5.0		**50.2**	50.00	4.980	90.5	74.4	130	03/10/2016
m,p-Xylenes	5.0		**48.2**	50.00	2.110	92.2	70.5	126	03/10/2016
o-Xylene	5.0		**49.2**	50.00	5.030	88.4	71.2	124	03/10/2016
Toluene	5.0		**55.0**	50.00	12.89	84.2	69.5	118	03/10/2016
Trichloroethene	5.0		**44.6**	50.00	0	89.2	69.4	117	03/10/2016
Xylenes, Total	5.0		**97.5**	100.0	7.140	90.3	71.1	125	03/10/2016
Surr: 1,2-Dichloroethane-d4			**51.5**	50.00		102.9	74.7	129	03/10/2016
Surr: 4-Bromofluorobenzene			**52.0**	50.00		104.1	86	119	03/10/2016
Surr: Dibromofluoromethane			**46.3**	50.00		92.5	81.7	123	03/10/2016
Surr: Toluene-d8			**48.5**	50.00		97.1	84.3	114	03/10/2016

Client: Missouri Geological Survey **Work Order:** 16030645

Client Project: Appendix I & II **Report Date:** 15-Mar-16

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 117046 **SampType: MSD** Units **µg/L** RPD Limit **20**

SampID: 16030645-001EMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1-Dichloroethene	5.0		**44.6**	50.00	0	89.2	43.56	2.31	03/10/2016
Benzene	2.0		**128**	50.00	88.05	80.0	124.8	2.59	03/10/2016
Chlorobenzene	5.0		**45.6**	50.00	0	91.3	44.57	2.35	03/10/2016
Ethylbenzene	5.0		**51.4**	50.00	4.980	92.9	50.23	2.40	03/10/2016
m,p-Xylenes	5.0		**49.7**	50.00	2.110	95.1	48.23	2.94	03/10/2016
o-Xylene	5.0		**50.2**	50.00	5.030	90.4	49.24	1.95	03/10/2016
Toluene	5.0		**56.8**	50.00	12.89	87.9	54.98	3.33	03/10/2016
Trichloroethene	5.0		**46.0**	50.00	0	92.0	44.61	3.09	03/10/2016
Xylenes, Total	5.0		**99.9**	100.0	7.140	92.7	97.47	2.44	03/10/2016
Surr: 1,2-Dichloroethane-d4			**52.1**	50.00		104.2			03/10/2016
Surr: 4-Bromofluorobenzene			**52.9**	50.00		105.7			03/10/2016
Surr: Dibromofluoromethane			**46.8**	50.00		93.6			03/10/2016
Surr: Toluene-d8			**49.0**	50.00		97.9			03/10/2016

Receiving Check List

http://www.teklabinc.com/

Client: Missouri Geological Survey
Client Project: Appendix I & II

Work Order: 16030645
Report Date: 15-Mar-16

Carrier: Matt Wood

Received By: AMD

Completed by: M. Kaminski
On: 09-Mar-16
Mary Anne Kaminski

Reviewed by: Elizabeth A. Hurley
On: 09-Mar-16
Elizabeth A. Hurley

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C **5.42**
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

Additional nitric acid was needed upon arrival at the laboratory. MAK 3/9/16

CHAIN OF CUSTODY

pg. ____ of ____ Work order # 1603 0445

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client: Missouri Geological Survey
Address: 11816 Lackland Road
City / State / Zip St. Louis, MO 63146
Contact: Kenny Hemmen **Phone:** ~~(314) 997-7440~~ 573-368-2163
E-Mail: brenna.mcdonald@dnr.mo.gov **Fax:**

Samples on: ☑ ICE ☐ BLUE ICE ☐ NO ICE 5.42 °C
Preserved in: ☑ LAB ☐ FIELD
FOR LAB USE ONLY
Lab Notes ADD'L HNO3 MAK 3/9/16

Are these samples known to be involved in litigation? If yes, a surcharge will apply ☑ Yes ☐ No
Are these samples known to be hazardous? ☐ Yes ☒ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section. ☐ Yes ☒ No

Client Comments:
Metals: Sb As Ba Be Cd Cr Co Cu Pb Mg Mn Ni Se Ag Tl Sn V Zn
OK head space, MAK 3/9/16
Thank You.
Teklab, Inc. Courier Pick Up

Project Name/Number Appendix I & II
Sample Collector's Name BRENNA McDONALD

Results Requested ☐ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other ____ ☐ 3 Day (50% Surcharge)
Billing Instructions

Lab Use Only	Sample Identification	Date/Time Sampled	UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER	Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	Hg	Metals	Sulfate	SVOCs	TOC	VOCs	MS/MSD
	~~PZ-203~~																						
1603 0445 001	PZ-103-SS	3/8/16 1015	1	1		1	3									✓	✓	✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Brenna McDonald	3/9/16 1030	Renee Daniels	3-9-16 10:30
Renee Daniels / MW	3/9/16 1:52	MW	3/9/16 1:52
MW	3/9/16 4:03	Omar Ollello	3/9/16 403

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client.

BottleOrder: 29706

MAK 3/9/16

Landfill Monitoring Report

Bridgeton Sanitary Landfill
Permit 0118912
St. Louis County

February 29 - March 9, 2016

Prepared For:

Missouri Department of Natural Resources
Division of Environmental Quality
Solid Waste Management Program
and
Missouri Geological Survey

Prepared By:

Missouri Department of Natural Resources
Division of Environmental Quality
Environmental Services Program

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APPENDIX A - QA/QC Water Monitoring Checklist for Solid Waste Disposal Facilities

APPENDIX B - Monitoring Well Static Water Levels

APPENDIX C - Field Measurements and Sample Notes

APPENDIX D - Photographs

1.0 Introduction

At the request of the Solid Waste Management Program (SWMP) and the Missouri Geological Survey (MGS), groundwater monitoring was conducted during February 29 - March 9, 2016, at Bridgeton Sanitary Landfill in Bridgeton, Missouri. Lynn Milberg of the Division of Environmental Quality (DEQ), Environmental Services Program (ESP), Water Quality Monitoring Section observed sampling techniques and field analyses of Republic's contractor, Feezor Engineering, Inc. (Feezor). Sampling and field analyses were performed by John Wilkinson, Mike Spurgeon and Craig Hegna.

2.0 Site Location and Description

The landfill is located at 13570 St. Charles Rock Road, Bridgeton, Missouri 63044.

The landfill is an inactive, permitted facility (permit #0118912). The landfill transfer station was accepting waste at the time of the sampling event. All sampled monitoring wells and leachate sumps were located on the Republic Services property.

3.0 Methods

3.1 Static Water Level Measurements

Static water levels and total depth or top of pump were measured and well conditions observed at fifty-three wells on February 29, 2016. Feezor used a Dipper-T water level meter manufactured by Heron Instruments. The instrument was cleaned between wells by wiping with a Liquinox soaked paper towel and deionized water (DI) soaked paper towel as the tape was reeled up from the well. The tape was then generally rinsed with DI by squirting the whole tape. See APPENDIX B for water level information.

3.2 Sample Collection

Samples were split by alternating bottles until all bottles for each parameter were filled. All bottles were filled by Feezor staff.

All state sample bottles were provided by the contract laboratories and were pre-preserved for the various parameters. Each bottle received a sample label containing, at a minimum, a unique identifying number, sample date/time, and collector's name or initials. Although Feezor staff filled all bottles, ESP personnel took possession of the samples for label and chain-of-custody (COC) purposes. After all bottles were filled, the sample was placed in a cooler with ice.

Detailed notes for each well can be found in APPENDIX C. The sampling techniques and field analyses of the contractor were critiqued using the "QA/QC Water Monitoring Checklist for Solid Waste Disposal Facilities" (APPENDIX A).

3.3 Monitoring Well Samples

Well purging and sampling techniques were observed at nineteen groundwater wells from March 1-9, 2016. Eleven wells were purged and sampled by low flow purge techniques with dedicated bladder pumps and a QED Micropurge control box. Eight wells were purged and sampled using an automated inertial lift pump system automated by a Waterra Hydrolift II. Initial water levels were recorded, pump tubing was purged and purging continued until field parameters stabilized. Field parameters (pH, conductivity, temperature, turbidity, dissolved oxygen and oxidation reduction potential) and water level (only for bladder pumps) were recorded every four minutes. Wells were considered stable after three consecutive measurements met the following criteria: pH ±0.1, conductivity ±10% and temperature ±0.5 °C.

Detailed notes for each well can be found in APPENDIX C.

3.4 Leachate Sump Samples

Attempts were made to sample six leachate sumps. If leachate was present, samples were collected using flexible tubing attached to a sampling port. Only three sumps produced leachate. Sump LCS-4B ran dry after filling VOA vials and half of the semi-volatile parameter bottle. LCS-5A produced enough leachate to fill all desired containers. LCS-6B was sampled on March 7, 2016, for VOA, semi-volatiles and metals. On March 8, 2016, staff returned to collect inorganic parameters and was able to partially fill radiological bottles before the sump ran dry. No further attempts were made to get leachate from this sump.

Detailed notes for each sump can be found in APPENDIX C.

3.5 Analyses Requested

Sample analysis for Feezor was completed by Pace Analytical. State samples were submitted to Test America and Teklab (duplicates) laboratories for analysis.

Analytical parameters were selected by MGS and SWMP staff. Parameters included those listed in Appendix I and II of Missouri code of regulations 10 CSR 80-3.010. Parameters included Appendix I and II Volatile Organic Compounds (VOCs) and Semi-volatile Organic Compounds (SVOCs) (minus herbicides, pesticides, and PCBs). Appendix I inorganics include: Ammonia (NH3 as N, mg/L), Chloride, Chemical Oxygen Demand

(COD), Total Dissolved Solids (TDS), Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Fluoride, Hardness (calculated, mg/L), Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Nitrate/Nitrite, Phosphorus, Selenium, Silver, Sodium, Sulfate, Thallium, Vanadium, Zinc. Radiological isotopes included Radium 226/Radium 228 (total and dissolved (to be filtered in the lab), Uranium 234, 235, 238, Thorium 228, 230, 232, and Tritium.

3.6 Chain-of-Custody

Although COC information for Feezor was verbally reviewed, completion of their COC's was not observed.

For state samples, personnel entered information onto laboratory provided COC forms. Information included location, corresponding label numbers, date and time of collection, and parameters to be analyzed. ESP field personnel maintained custody of the samples until relinquishing them to the contract laboratories. Copies of COC forms were retained by MGS staff.

3.7 Quality Assurance/Quality Control (QA/QC)

3.7.1 QA/QC Methods

ESP personnel did not observe calibration or verification checks of field meters. Meters were initially calibrated and each day after, meters were checked to see if they read within acceptable limits of a standard. If meters were within limits they were not re-calibrated. On March 1 and March 9, 2016, the state provided known standards and a certified thermometer to verify Feezor meter readings for pH, conductivity, temperature and turbidity.

Results of the certified standard verification can be found in section IV of the checklist (APPENDIX A).

3.7.2 QA/QC Samples

3.7.2.1 Trip Blank

A trip blank is a sample consisting of analyte-free water prepared by the laboratory. It accompanies sample containers and samples in the field, and is returned to the laboratory for analysis.

Both Feezor and the state carried and submitted trip blanks for analysis. The state submitted one trip blank for each day. Feezor submitted one trip blank for each shipment of samples.

3.7.2.2 Duplicate Samples

Missouri Geological Survey staff selected which wells would be duplicated for state sample collection. It should be noted that state duplicate samples were not analyzed for radioactive isotopes. The state duplicated samples at PZ-103-SS and PZ-116-SS.

Feezor duplicated samples at PZ-106-SD and MW-1204. Duplicate sample bottles were inserted in the bottle filling rotation for each parameter (e.g. Feezor, Feezor duplicate, state, state duplicate).

3.7.2.3 Other QA/QC Samples

Feezor collected one field blank at well PZ-103-SS on March 8, 2016. Also on the 8th, at well PZ-200-SS, Feezor collected and field filtered an additional cubitainer for radiological parameters. The state collected additional bottles at well PZ-103-SS at the request of the laboratory to use as a matrix spike and a matrix spike duplicate.

4.0 Observations and Discussion

Weather conditions varied greatly throughout the sampling event. Monday, February 29, 2016, consisted of sunny skies with high temperatures in the low 70's (°F). Tuesday, March 1, 2016, started in the mid-50's (°F), but dropped into the low 30's during the afternoon. Light rain and sleet occurred throughout the morning and winds increased to 20-30 mph during the day. Wednesday, March 2, 2016, was dry with moderate winds and temperatures ranging from the mid-30's to mid-40's (°F). Thursday, March 3, 2016, averaged in the mid-40's (°F) with light rain throughout the day. Friday, March 4, 2016, consisted of light winds and temperatures in the mid-40's (°F). Monday, March 7, 2016, was in the mid-60's (°F) with light rain early in the morning. Tuesday and Wednesday, March 8 - 9, 2016, ranged in the mid- to upper 60's (°F) with light rain during the overnight hours. In total, 0.22 inches of rain fell during the sampling event as measured from the Lambert International Airport weather station.

Procedures were compared to recommendations provided in U.S. Environmental Protection Agency (USEPA), ASTM International (ASTM) and DNR, SWMP fact sheet documents. Specifically, USEPA Publication 540/S-95/504 *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures*; ASTM D6771 *Standard Practice for Low-Flow Purging and Sampling for Wells and Devices Used for Ground-Water Quality Investigations* and SWMP *Collection, Handling and Reporting Procedures for Groundwater Samples (PUB181, 05/2014)* were referenced. A few repeated observations or deviations from the above mentioned guidance will be discussed here. The landfill's site-specific Quality Assurance Project Plan and/or Sampling Plan was not considered in documenting the discussed deviations.

A few wells did not appear to have identification markings on the outside well casing. Several wells had well number identification markings that were faded and not easily readable. Most of these wells did, however, have an identification number written on the internal PVC wellhead cap to verify the well number. See APPENDIX A, Section I.B.2 and photos in APPENDIX D.

Most wells that could be impacted by traffic or mowing equipment were protected by steel and concrete bollards. However, well PZ-205-SS did not have bollards and is located right along the roadway. Wells PZ-101-SS and PZ-203-SS had bollards that have clearly been struck at some point and were leaning or completely knocked over. See photos in APPENDIX D.

The concrete pad for PZ-205-SS was also severely cracked. However, the well itself did not appear to have any damage. It could not be determined if this was damage from being struck or from shifting after the pad was poured. See photo in APPENDIX D.

Depth to the bottom of the well is not measured on wells that have dedicated bladder pumps. Only those wells that were sampled with an inertial lift pump have total depth measured. Both levels were measured on February 29, 2016. Standing water levels were again measured prior to purging each well. If the evacuation was done by bladder pump, water levels were recorded during monitoring. However, final water levels were not recorded after sampling was complete. If evacuation was done by an inertial lift pump, intermediate water levels were not recorded, but final water levels were. Both EPA/540/S-95/504 and ASTM D6771 recommend periodic and/or final water levels to be monitored to prevent excessive drawdown of the well.

Both EPA/540/S-95/504 and ASTM D6771 do not recommend inertial lift pumps for low flow purging because of the potential for mixing of casing water with formation water due to the pumping action. In shallower wells it could also lead to the disturbance of sediment within the casing. A Waterra Hydrolift II was utilized on eight wells.

The EPA document recommends drawdown goals be <0.1 meter, while the ASTM guidance recommends never exceeding the distance between the top of the well screen and the pump intake. Ideally, pump rates would be equivalent to recharge rates. The <0.1 meter recommendation was exceeded. The more practical ASTM guidance could not be assessed because state personnel did not have well screen depths available. Drawdown averaged 5.2 ft. and ranged from approximately 0 ft. to 10 ft.

Feezor used pH, conductivity and temperature to determine stability of the well. Although the SWMP fact sheet recommends temperature as a stability parameter, both EPA and ASTM documents recommend dissolved oxygen as a third parameter. Turbidity or oxidation reduction potential could also be utilized. Both EPA and ASTM documents

recommend a stabilization criterion of +/- 3% for conductivity. During the sampling event a +/- 10% criterion was used.

Feezor staff stated all field meters are not calibrated daily. Only the dissolved oxygen meter is calibrated daily. Other meters are initially calibrated and then, checked against a standard at the beginning and end of each day. Only if the check fails is the meter re-calibrated. The ASTM document recommends daily calibrations for instruments used to measure indicator parameters.

Measurements of certified standards were within range of the acceptable limits except the low standard for turbidity. Checks at the beginning of the week and the end of the week were slightly higher than the upper limit of the acceptable range.

Un-met recommendations specific to the SWMP fact sheet, included triple rinsing measuring devices with DI water after each use; placing plastic sheeting near the well to prevent contamination; and including one trip blank per day.

Detailed notes regarding additional sampling techniques and field analyses of the contractor are documented in the "QA/QC Water Monitoring Checklist for Solid Waste Disposal Facilities" (APPENDIX A).

5.0 Data Reporting

All analytical reports were sent directly to the MGS and will not be addressed in this report.

Submitted by: _____
Lynn Milberg
Section Chief
Water Quality Monitoring Section
Environmental Services Program

Date: 4/28/16

Approved by: _____
Brian Allen
Director
Environmental Services Program

BA:lmc

c: Chris Nagel, Director, Solid Waste Management Program
Brenna McDonald, Environmental Geology Section, Missouri Geological Survey
Peter Price, Environmental Geology Section, Missouri Geological Survey

APPENDIX A

QA/QC Water Monitoring Checklist for
Solid Waste Disposal Facilities

Landfill Monitoring Report
Bridgeton Sanitary Landfill
St. Louis County
February 29 – March 9, 2016

QA/QC WATER MONITORING CHECKLIST FOR SOLID WASTE DISPOSAL FACILITIES

Facility Name: Bridgeton Sanitary Landfill

Permit #: 0118912 No. of Wells: 19

Date of Sampling: February 29 - March 9, 2016

Contractor Name: Feezor Engineering, Inc.

Contractor Address: 3405 Hollenberg Dr.
Bridgeton, MO 63044

Contractor Phone No: 636-578-8635

Participants	Name	Dates Participating
Republic Services:		
Dept. of Natural Resources:	Lynn Milberg (Environmental Services Program)	All
	Brenna McDonald (MO Geological Survey)	All
Feezor Engineering, Inc.:	John Wilkinson	All
	Mike Spurgeon	2/29 – 3/3
	Craig Hegna	3/3 – 3/9
Other:	Bob Lambrechts (Lathrop and Gage)	2/29
	Peggy Whipple (MO Attorney General's Office)	2/29-3/2

	Yes	No
I. General Review of Monitoring Well Sample Collection Procedures		
A. Sampling Frequency/Guidelines		
1. How often are monitoring wells sampled? Quarterly		
2. Is the contractor familiar with the site's approved groundwater monitoring plan and relevant USEPA and industry sampling protocol for low-flow or bailer sampling? See EPA Publication 540/S-95/504 Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures and ASTM D6771.	☒	☐
B. Monitoring Well Location and Security		
1. Does the contractor have a map of the facility available to locate wells?	☒	☐
2. Are the wells clearly marked with an identification numbering system?	☐	☒

Several wells were not clearly readable on the outside of the casing. Attached photos for PZ-103-SS, PZ-104-SD, PZ-104-SS, PZ-109-SS, PZ-203-SS, PZ-205-SS, and PZ-206-SS depict difficult to read or non-existent markings. Although not marked or easily readable on the outside of the casing, wells PZ-104-SD, PZ-104-SS, and PZ-203-SS were clearly marked on the internal PVC cap covering the wellhead. PZ-208-SS had a sign, but it was detached from the casing and simply laying in the grass nearby.

Several of the wells were remarked with a paint pen before the end of the sampling event.

3. Are monitoring well heads covered with protective caps?	☒	☐
4. Are the caps locked to prevent unauthorized access?	☒	☐
5. Are the monitoring wells protected from damage by mowers and other heavy equipment?	☐	☒

Protective bollards were present at most wells that were in a location that could possibly be struck by vehicles or mowers.

- *Two bollards for PZ-203-SS closest to the roadway had been struck at some point; one was leaning and the other was completely knocked over, leaving the northwestern side of the well unprotected.*
- *PZ-101-SS also had at least one bollard that had been struck at some time and was severely leaning.*
- *Well PZ-205-SS did not have bollards and sits right along a roadway.*

Yes No

Wells such as PZ-104-SD, PZ-104-SS, PZ-105-SS, PZ-116-SS, PZ-206-SS, and MW-1204 were not in locations that could easily be struck and did not have bollards. PZ-204-SS on the Materialogic property is recessed in the concrete pad to allow mowers to pass over without causing damage to the well.

6. Do the wells show indication of damage (i.e., loose casings, leaning, or crooked)? ☐ ☒
   The concrete pad of PZ-205-SS is severely broken, although it appears only to be affecting the concrete and not the well structure itself.

7. Describe the overall condition of the wells.
   All wells observed appeared to be in good condition and did not show any signs of damage.

C. Measurement of Well Depths

1. What type/brand of measuring device is used?
   A Heron Instrument Dipper-t electronic tape was used to measure all water levels and top of pump or total depth measurements

2. Is there a permanent depth measurement reference point at each well? ☒ ☐

3. Are measurements taken to the nearest inch or 0.1 foot? ☒ ☐

4. Does the contractor measure both the depth to standing water and depth to the bottom of the well? ☐ ☒

   Standing water level and total depth or top of pump, were measured at wells on 2/29. If a well has a dedicated pump, a measurement to the top of the pump is made instead of total depth. Total depth of the well is not routinely measured at wells with dedicated pumps.

   All wells that were sampled had standing water levels measured again before purging began. For wells with a dedicated bladder pump, water levels were measured and recorded during purging. Final water levels were not recorded after sampling was completed. If wells were purged and sampled using a Waterra pump, only final water levels were recorded.

5. Describe the method and materials used to clean the measuring device.

Yes No

Liquinox was squirted on one paper towel and deionized water on another. The two towels were held, one in front of the other, around the tape as it was retrieved from the well. The sensor was then wiped clean before storing in the holder attached to the tape reel. The reeled tape was then rinsed again with DI water before storing. Paper towels and gloves were then disposed of.

D. Well Evacuation/Sample Collection

1. Were measures taken to prevent equipment from contacting potentially contaminated surfaces? ☒ ☐

   Any disposable items were discarded and replaced at each new site. Sample bottles were kept in the cooler until they were ready to be filled and were put back into the cooler after they were filled. Although plastic sheeting was not placed on the ground, sampling equipment was never handled in a way that would lead to contamination.

2. What method (ex: micropurging) is used to evacuate/sample the wells?

   Feezor utilized a low flow purge method at eleven wells with dedicated bladder pumps installed. Eight wells had tubing installed for use with an automated, inertial pumping system. Although flow rates were maintained at reduced rates, the inertial pump does not meet the definition of low flow purging due to the potential for pumping action causing mixing of the stagnant casing water with formation water. In shallower wells it could also lead to the disturbance of sediment within the casing.

   For wells with bladder pumps water levels were recorded during the purging process, however drawdown was not a factor in determining flow rates. Drawdown averaged 5.2 ft. and ranged from approximately 0 ft. to 10 ft.

   Flow rates were more difficult to keep consistent with the Waterra pump. Several wells required continuing adjustment to maintain flow of any kind. This lack of stable pumping rate also produced difficulties with the flow-thru cells by introducing air into the cell. This caused meter readings to jump around more than usual.

3. Describe the type(s) of equipment used to evacuate/sample the wells.

   A QED Micropurge Basic Controller box powered by a gas powered compressor was used on wells with a dedicated bladder pump.

   Wells without a dedicated pump were purged by an inertial pump automated by a Waterra Hydrolift II and powered by a generator.

	Yes	No
4. Describe the method used to determine the appropriate volume of water for purging. *Pump tubing volumes are calculated and noted on field sheets, along with previous purge settings, for each well. This data was used to determine current purge volumes. For dedicated pumps, ~22 mL/ft was evacuated. For Waterra pumps ~39 mL/ft.*		
5. Is the volume of evacuated well water measured? *Volumes were measured by collecting in a 1000mL graduated cylinder.*	☒	☐
6. Are wells evacuated in accordance with established USEPA and industry standards? Note that flow-through cells are required for low-flow sampling.	☐	☒

An inertial lift pump was used for low flow purging on several wells. Because of the potential for mixing of casing with formation waters due to the pumping action this is generally not recommended.

A stabilization criterion of +/- 3% for conductivity is recommended instead of the 10% used during this sampling event.

Well drawdown was not required to be stable during purging and sampling. This exceeds the EPA recommendation and possibly the ASTM guidance. Ideally pump rates would be equivalent to recharge rates. Final water levels are also not recorded, except on well purged using the Waterra pump.

Recommendations given in the Missouri Department of Natural Resources, Solid Waste Management Program's fact sheet, were not met. These included triple rinsing measuring devices with DI water after each use (see question I.C.4); placing plastic sheeting near well to prevent contamination (see question I.D.1); and submitting one trip blank per sampling day (see question I.E.2).

These observations are made in direct reference to the above mentioned guidance documents and are in recognition that deviations may be approved in the site specific Quality Assurance Project Plan and/or Sampling Plan.

7. Describe the procedure used for the collection, management, and/or disposal of evacuated water.

Purge volumes collected in the graduated cylinder were dumped into a 5-gallon bucket as the cylinder filled. Once sampling began the sample whip was held over the 5-gallon bucket to catch water between bottles. After sampling the bucket(s) were transported to the leachate collection system and disposed of.

	Yes	No
8. Does each well have dedicated evacuation equipment? If no, describe materials and methods used to clean equipment.	☒	☐

All wells except PZ-206-SS had dedicated bladder pumps or inertial pump tubing already installed. Tubing was installed on 3/3 (several days prior to sampling) and left after sampling was completed.

E. Sample Collection

1. Does each well have dedicated/disposable sampling equipment? If no, describe materials and methods used to clean equipment.	☒	☐
2. Are equipment blanks, duplicate samples, and/or trip blanks collected as necessary?	☒	☐

One trip blank is included per shipment. Duplicates are collected every 20 samples. One field blank was created at well PZ-103-SS. Also, at well PZ-200-SS an additional cubitainer for radiological parameters was field filtered and submitted for analysis.

See notes in APPENDIX C for wells with quality control samples collected.

3. Is care taken to avoid placing clean sampling equipment on the ground or other contaminated surfaces prior to sample collection?	☒	☐

Sample containers were kept in the cooler until needed and then returned to the cooler once the bottle was filled. Once removed from the cooler, the bottles remained capped until just before switching containers. If a cap was dropped it was thoroughly rinsed with purge water prior to replacing on the filled bottle.

4. Are samples collected in a manner that will minimize aeration and/or volatilization of the sample?	☒	☐

Several samples were effervescent and removal of air bubbles was difficult. Per instructions by Feezor's contract lab, they would rinse the preservative from the vials, eliminate air bubbles and submit unpreserved.

See notes in APPENDIX C.

5. Are upgradient wells sampled first?	☐	☒

Contamination concerns due to sampling order were not considered a factor due to utilizing dedicated equipment and low flow techniques.

6. Describe the procedure used when splitting samples with the state.

Yes No

Bottles were filled by alternating bottles until all were filled. Feezor bottles were filled first, followed by DNR bottles. If duplicates were collected the duplicate bottle was filled after each of the original bottles for each parameter (e.g. Feezor, Feezor duplicate, DNR, DNR duplicate).

II. Review of Field Measurements, Sample Handling and Preservation Procedures

A. Field Measurements

1. Are the following parameters measured in the field?

	Yes	No
pH	☒	☐
Temperature	☒	☐
Specific Conductivity	☒	☐
Dissolved Oxygen	☒	☐
Redox Potential	☒	☐

Turbidity was also collected at all wells.

2. Are field meters properly calibrated and maintained? ☐ ☒

The dissolved oxygen meter is calibrated at the beginning of each day. For other meters, calibration checks are run at the beginning and at the end of each day. If the beginning calibration check is close the meter is not re-calibrated.

ASTM D6771 recommends daily calibration for instruments used to measure indicator parameters. To document the precision and accuracy of instruments, daily calibration and checks against secondary standards should be considered part of a quality instrument maintenance plan.

3. Are field measurements within the acceptable limits of the certified standard? ☒ ☐

See section IV for certified standard comparisons.

4. Are field measurements made using a split portion of sample rather than in a container to be analyzed by the lab? ☒ ☐

All parameters except turbidity were measured in a flow-thru cell. The aliquot for turbidity measurement was collected directly into the glass sample vial and inserted into the meter.

5. Describe the equipment used for field measurements (type, model, etc).

pH	WTW pH/conductivity/temperature 3400i
Temperature	WTW pH/conductivity/temperature 3400i
Specific Conductivity	WTW pH/conductivity/temperature 3400i

		Yes	No
Dissolved Oxygen	WTW		
Redox Potential	WTW		
Turbidity	Hf Scientific, Inc. MicroTPW		

6. Describe the criterion used to determine purge parameter stability.

   Once the initial purge volume was reached, field parameters were checked every four minutes until at least three consecutive readings met the stabilization criteria. A minimum of four readings would be collected. Purge parameter stabilization is determined on pH, conductivity and temperature. Although turbidity, dissolved oxygen and oxidation-reduction potential is recorded at each stabilization check, it is not used to determine stability. Criterions are: +/- 0.1 for pH; +/-10% for conductivity; and +/-0.5°C for temperature. The recommended range for conductivity is +/- 3%.

B. Sample Containers

1. Are sample containers new? If not, explain in Section V. ☒ ☐

   Sample containers are provided by the contract laboratory according to their test method and QA/QC requirements.

2. Are sample containers appropriate for each parameter? ☒ ☐

   Sample containers are provided by the contract laboratory according to their test method and QA/QC requirements.

C. Sample Handling and Preservation

1. Are samples directly transferred from the sampling device to the sample container? ☒ ☐

2. Are samples containerized in order of their volatilization sensitivity? (VOA, TOC, ammonia, field measurements, chloride) ☒ ☐

   Samples were collected for VOC, TOC, large volume organics, and then inorganic constituents and finally radiological parameters.

3. Are samples preserved appropriately for each parameter? ☒ ☐

   Bottles came pre-preserved from the laboratory according to their test method requirements.

4. Is a trip blank prepared for the VOC/TOC samples? ☒ ☐

   Any trip blanks carried through the sampling event are provided by the laboratory.

	Yes	No
At least one trip blank was carried per shipment.		
5. Was the headspace eliminated from the VOC containers?	☒	☐
Headspace was eliminated on all samples whenever possible. However, several sampling locations (wells and leachate sumps) were very effervescent and foamy and bubbles could not be eliminated after several attempts. Per instructions by Feezor's contract lab, they would rinse the preservative from the vials, eliminate air bubbles as much as possible and submitted the lab unpreserved.		
See notes in APPENDIX C*.*		
6. Are samples put on ice immediately after collection?	☒	☐
7. How long are samples in route to the analytical lab?		
Samples are typically shipped every other day.		

III. Review of Field Documentation and Sample Chain-of-Custody Procedures

A. Sample Documentation

	Yes	No
1. Are sample labels used?	☒	☐
Sample containers came pre-labeled from the laboratory except for cubitainers for radiological parameters. The cubitainers were marked with the well ID at time of collection.		
2. Do they remain attached and legible even when wet?	☒	☐
3. Is the following information provided on the label?		
Sample number	☒	☐
Well number	☒	☐
Name of collector	☒	☐
Date and time of collection	☒	☐
Facility name	☒	☐
Parameters to be analyzed	☒	☐
Preservative used	☒	☐
The well number served as the unique sample identifier for each sample.		

B. Site Information

	Yes	No
1. Is field information recorded by the contractor?	☒	☐

	Yes	No
Individual field forms are prepared for each well and all field information is recorded on these forms.		

2. Which of the following are recorded?

Time and date of sampling and evacuation	☒	☐
Weather conditions at time of sampling	☒	☐
Well identification number	☒	☐
Total depth of wells	☐	☒
Static water level depth	☒	☐
Well yield - high or low	☐	☒
Field measurements data	☒	☐
Field team members	☒	☐
Additional observations	☒	☐

Time and date information includes purge start time, time for each stability reading and sample time.
Total depth of well is not recorded for wells with dedicated pumps, rather depth to top of pump is recorded. For wells that do not have dedicated pumps the total depth is recorded after sampling is completed.
Field measurements include pH, conductivity, temperature, turbidity, dissolved oxygen and oxidation reduction potential. Total purge volume and initial water levels were recorded for all wells. Final water levels were only recorded on well sampled with the Waterra pump.
Additional observations include sample observations (color, odor, effervescence, etc.), and any unique occurrences during sampling.

C. Chain-of-Custody Records

1. Is each sample recorded on a chain-of-custody? ☒ ☐

2. What information is included on the chain-of-custody?

Well ID, sample date and time, company/site, project name, sample ID (well ID), sample temperature, number of containers, preservatives, analyses requested, notes and relinquished by/date/time.

IV. Certified Standard Results

Parameter	Contractor Results		True Value	Acceptable limits Lot number/Expiration
pH (units)	6.16 (3/1) 6.21 (3/9)		6.04	5.84-6.24 NSI Solutions Lot #032615 Exp.3/31/2017
Conductivity (µS/cm)	314 (3/1) 311 (3/9)		328	295-361 NSI Solutions Lot #N0615 Exp. 5/31/2017
Temperature (°C)	11.1 (3/1) 17.3 (3/9)		10.7 17.3	+/- 1 °C Values compared to ESP certified thermometer #1245908
Turbidity (NTU)*	3/1 11.24* 21.95 104.4 778.4	3/9 11.04* 19.95 104.3 797.0	 10 20 100 800	Formazin Calibration Standards 9-11 (A5281/Oct. 2017) 18-22 (A5280/Oct. 2017) 90-110 (A5275/Sept. 2017) 720-880 (A5307/Oct. 2017)

* Field meter result exceeded the desired +/- 10%.

V. <u>Additional Comments/Remarks</u>

Feezor bottle set:
VOC – (3) 40 mL vials; HCl preserved
TOC and Nutrients– (1) ~250 mL amber bottle; H_2SO_4 preserved
Semi-volatiles – (2) 1 liter amber bottles + (1) ~125 mL amber bottle
Metals – (1) 250 mL plastic bottle; HNO_3 preserved
Inorganics – (1) 250 mL plastic bottle; unpreserved
(2) 1-gallon cubitainers for Radium226/228, Uranium 234, 235, 238, Thorium 228, 230, 232 and Tritium

APPENDIX B

Monitoring Well Static Water Levels

Landfill Monitoring Report
Bridgeton Sanitary Landfill
St. Louis County
February 29 – March 9, 2016

Bridgeton Sanitary Landfill
Groundwater Monitoring Wells Static Water Levels

Measured by: John Wilkinson, Mike Spurgeon - Feezor Engineering, Inc.
Date: 2/29/2016

Well ID	Water Level (feet below top of casing)	Total Depth or Top of Pump (feet)	Well ID	Water Level (feet below top of casing)	Total Depth or Top of Pump (feet)
PZ 100 SS	28.52	89.08	PZ 201A SS	9.69	86.21
PZ 100 SD	30.11	96.20	PZ 202 SS	11.65	85.20
PZ 100 KS	22.90	381.95	PZ 203 SS	24.98	111.11
PZ 101 SS	36.50	155.11	PZ 204 SS	7.33	87.98
PZ 102 SS	20.09	91.25	PZ 204 A	4.39	84.31
PZ 102 RSS	19.17	91.14	PZ 205 SS	28.99	92.91
PZ 103 SS	11.45	149.63	PZ 205 AS	29.09	54.10
PZ 104 SS	19.65	140.27	PZ 206 SS	27.10	129.79
PZ 104 SD	21.11	120.60	PZ 207 AS	28.39	39.00
PZ 104 KS	16.47	93.25	PZ 208 SS	19.25	100.34
PZ 105 SS	24.36	144.79	PZ 209 SS	21.59	99.89
PZ 106 SS	12.32	161.57	PZ 209 SD	23.39	101.44
PZ 106 SD	12.95	196.25	PZ 210 SS	25.60	102.45
PZ 106 KS	2.20	375.01	PZ 210 SD	26.51	101.51
PZ 107 SS	30.97	103.78	PZ 211 SS	20.04	98.09
PZ 109 SS	21.91	130.94	PZ 211 SD	21.94	99.30
PZ 110 SS	27.59	107.23	PZ 212 SS	9.21	93.89
PZ 111 SD	32.20	197.08	PZ 212 SD	14.22	92.85
PZ 111 KS	6.76	374.51	PZ 305 AI	29.89	43.65
PZ 112 AS	28.75	38.33	MW 1204	14.40	222.60
PZ 113 SS	28.12	160.75	S-84	22.81	32.89
PZ 113 AS	27.80	39.15	D-85	23.05	77.08
PZ 113 AD	27.90	110.08	T-68	16.20	40.45
PZ 114 AS	16.58	26.10	LR-104	30.02	69.32
PZ 115 SS	12.65	81.02	LR-103	37.11	49.79
PZ 116 SS	15.90	149.85	I-73	28.59	50.79
PZ 200 SS (GMP 7)	20.30	99.50			

APPENDIX C

Field Measurements and Sample Notes

Landfill Monitoring Report
Bridgeton Sanitary Landfill
St. Louis County
February 29 – March 9, 2016

Leachate Sump Field Data Sheet

Samplers: John Wilkinson, Craig Hegna

Leachate Sump ID	Sample Date	Sample Time	pH*	SC * (µS/cm)	Temp* (°C)	Turbidity (NTU)	DO (mg/L)	ORP (mV)
LCS-1D	3/8/2016	1440						
LCS-2D	3/8/2016	1450						
LCS-3D	3/8/2016	1445						
LCS-4B	3/8/2016	0845						
LCS-5A	3/3/2016	1550	6.79	7980	29.8	3.71	2.24	-62
LCS-6B	3/7/2016	1610						
LCS-6B	3/8/2016	0800	7.49	16100	28.5	23.02	0.42	-130

Notes:

LCS-1D - Dry. Pump was running but no leachate could be obtained from the spigot.

LCS-2D - Power disconnected due to work in the area.

LCS-3D - Dry. Pump did not appear to be running.

LCS-4B - Ran dry before field parameters could be obtained. Ran dry after filling VOA vials and half of the semi-volatiles.
Returned at 1125 to try again but it was dry. Most likely sample was just the volume contained within the sampling spigot tubing.
Sample was black and thick with a strong leachate odor.
Headspace could not be eliminated in two of the three DNR VOA vials. VOA's were not rinsed prior to filling due to no effervescence.

LCS-5A - Initially checked with pH paper which read between 6 and7.
Sample was very foamy and tan in color. Strong landfill gas odor.
Headspace could not be eliminated and all VOA vials had headspace.

LCS-6B - On 3/7 only VOA's, Semi-volatiles and metals could be collected before sump began to go dry.
Returned on 3/8 to try to fill remainder of bottles. HNO3 radiological bottles were only partially filled before sump ran dry.
VOA's rinsed of preservative due to extreme effervescence and natural foaming of sample.
Sample was dark brown to black in color with strong odor.

Groundwater Monitoring Well Field Data Sheet

Date: 3/4/2016
Samplers: Jon Wilkinson, Craig Hegna
Site: Bridgeton SLF
Sample time: 0908
Well ID: PZ 101-SS

Static Water Level (ft below toc): 36.68
Final water level (ft below toc): 86.52
Purge Time Start: 0827
Top of pump (ft below toc): NA
Initial Purge Volume: 4750
Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
0854	4750		6.65	+/- 0.1	1987	+/- 10%	18.8	+/- 0.5	3.48		1.91		-85	
0858	6390		6.59	0.06	1957	1.51	24.5	5.7	7.93		0.58		-114	
0902	8000		6.58	0.01	1954	0.15	24.9	0.4	9.44		0.34		-124	
0906	9370		6.59	-0.01	1953	0.05	24.4	0.5	7.24		0.25		-128	

*Denotes stabilization parameters

Notes:

Purged and sampled using a Waterra pump

** Depth to bottom of well not recorded after initial recordings on 2/29/2016

Groundwater Monitoring Well Field Data Sheet

Date: 3/4/2016
Samplers: Jon Wilkinson, Craig Hegna
Site: Bridgeton SLF
Sample time: 1110
Well ID: PZ 102R-SS
Static Water Level (ft below toc): 19.68
Final water level (ft below toc): 74.98
Purge Time Start: 1030
Top of pump (ft below toc): NA
Initial Purge Volume: 3000
Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
1043	3000		7.09	+/- 0.1	887	+/- 10%	16.5	+/- 0.5	139.70		1.19		-38	
1047	3970		7.07	0.02	886	0.11	16.4	0.1	32.80		0.89		-35	
1051	5200		7.06	0.01	884	0.23	16.6	0.2	24.28		0.70		-35	
1055	6170		7.07	-0.01	880	0.45	15.6	1.0	16.70		0.53		-34	
1059	6950		7.07	0.00	885	-0.57	16.1	0.5	13.21		0.37		-35	
1103	7880		7.07	0.00	883	0.23	16.5	0.4	7.18		0.30		-38	
1107	8670		7.07	0.00	881	0.23	16.2	0.3	7.25		0.25		-37	

*Denotes stabilization parameters

Notes:

Purged and sampled using a Waterra pump

Gray coloration with lots of black particulates. This cleared as stabilization continued.

** Depth to bottom of well not recorded after initial recordings on 2/29/2016

Groundwater Monitoring Well Field Data Sheet

Date: 3/8/2016
Site: Bridgeton SLF
Well ID: PZ 103-SS
Static Water Level (ft below toc): 11.67
Purge Time Start: 0937
Initial Purge Volume: 5500

Samplers: Jon Wilkinson, Craig Hegna
Sample time: 1015
Final water level (ft below toc): 81.52
Top of pump (ft below toc): NA
Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
0948	5500		6.23	+/- 0.1	2290	+/- 10%	26.2	+/- 0.5	583.90		0.06		-112	
0952	6540		6.30	-0.07	2540	-10.92	24.7	1.5	304.00		0.08		-105	
0956	7240		6.29	0.01	2500	1.57	26.4	1.7	145.60		0.05		-116	
1000	8640		6.26	0.03	2280	8.8	25.6	0.8	80.88		0.04		-122	
1004	9450		6.00	0.26	2110	7.46	26.5	0.9	55.27		0.03		-121	
1008	10800		6.17	-0.17	1987	5.83	26.3	0.2	53.00		0.03		-122	
1012	11660		6.18	-0.01	1963	1.21	26.0	0.3	55.47		0.03		-123	

*Denotes stabilization parameters

Notes:

Purged and sampled using a Waterra pump

Gray and very turbid to begin. Improved as pumping continued.

Lots of air in line throughout purging and sampling. This created difficulties with the flow thru cell. Pump rate had to be increased several times to maintain suction.

DNR duplicate and Matrix Spike/Matrix Spike Duplicate site.

Field blank site for Feezor.

** Depth to bottom of well not recorded after initial recordings on 2/29/2016

Groundwater Monitoring Well Field Data Sheet

Date: 3/1/2016

Samplers: Jon Wilkinson, Mike Spurgeon

Site: Bridgeton SLF

Sample time: 1500

Well ID: PZ 104-SS

Static Water Level (ft below toc): 19.69

Final water level (ft below toc): ***

Purge Time Start: 1434

Top of pump (ft below toc): **

Initial Purge Volume: 2750

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
1442	2750	25.89	7.07	+/- 0.1	794	+/- 10%	26.6	+/- 0.5	1.79		0.19		-91	
1446	5150	28.72	7.06	0.01	790	0.5	26.2	0.4	0.79		0.11		-101	
1450	6150	30.62	7.07	-0.01	781	1.14	25.4	0.8	3.37		0.10		-107	
1454	7950	32.28	7.06	0.01	779	0.26	25.7	0.3	2.57		0.11		-112	
1458	8800	33.75	7.05	0.01	782	-0.39	25.8	0.1	3.09		0.08		-116	

*Denotes stabilization parameters

Notes:

Purged and sampled using a bladder pump.

*** Final water level readings not recorded after sampling was completed.

** Top of pump/depth to bottom of well not recorded after initial recordings on 2/29/2016

Groundwater Monitoring Well Field Data Sheet

Date: 3/1/2016

Samplers: Jon Wilkinson, Mike Spurgeon

Site: Bridgeton SLF

Sample time: 1258

Well ID: PZ 104-SD

Static Water Level (ft below toc): 21.10

Final water level (ft below toc): ***

Purge Time Start: 1236

Top of pump (ft below toc): **

Initial Purge Volume: 2250

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
1244	2250	24.10	6.88	+/- 0.1	1826	+/- 10%	26.1	+/- 0.5	3.83		0.14		-116	
1248	3350	24.70	6.93	-0.05	1875	-2.68	26.4	0.3	3.62		0.24		-126	
1252	4500	25.15	6.93	0.00	1872	0.16	26.1	0.3	2.56		0.10		-134	
1256	5600	25.40	6.92	0.01	1864	0.43	26.1	0.0	2.21		0.17		-136	

*Denotes stabilization parameters

Notes:

Purged and sampled using a bladder pump

***Final water level and top of pump/well bottom readings not recorded after sampling was completed.

** Top of pump/depth to bottom of well not recorded after initial recordings on 2/29/2016

Groundwater Monitoring Well Field Data Sheet

Date: 3/1/2016

Samplers: Jon Wilkinson, Mike Spurgeon

Site: Bridgeton SLF

Sample time: 0950

Well ID: PZ 105-SS

Static Water Level (ft below toc): 24.32

Final water level (ft below toc): ***

Purge Time Start: 921

Top of pump (ft below toc): **

Initial Purge Volume: 2700

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
0935	2700	30.34	7.16	+/- 0.1	1055	+/- 10%	16.6	+/- 0.5	10.09		5.28		-52	
0939	4050	32.49	7.13	0.03	1023	3.03	16.6	0.0	4.79		4.94		-42	
0943	5150	34.41	7.12	0.01	1042	-1.86	16.9	0.3	5.25		4.21		-32	
0947	6200	36.65	7.13	-0.01	1041	0.1	16.6	0.3	5.75		4.32		-29	

*Denotes stabilization parameters

Notes:

Purged and sampled using a bladder pump

***Final water level and top of pump/well bottom readings not recorded after sampling was completed.

**Top of pump/depth to bottom of well not recorded after initial recordings on 2/29/2016

Groundwater Monitoring Well Field Data Sheet

Date: 3/2/2016

Samplers: Jon Wilkinson, Mike Spurgeon

Site: Bridgeton SLF

Sample time: 1110

Well ID: PZ 106-SS

Static Water Level (ft below toc): 12.74

Final water level (ft below toc): ***

Purge Time Start: 1046

Top of pump (ft below toc): **

Initial Purge Volume: 3500

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
1055	3500	20.05	7.08	+/- 0.1	879	+/- 10%	21.7	+/- 0.5	1.08		0.12		-70	
1059	4850	21.92	7.08	0.00	880	-0.11	21.7	0.0	3.79		0.08		-78	
1103	6100	23.97	7.08	0.00	880	0	21.6	0.1	1.74		0.07		-81	
1107	7450	26.05	7.08	0.00	880	0	21.5	0.1	0.83		0.06		-84	

*Denotes stabilization parameters

Notes:

Purged and sampled using a bladder pump.

***Final water level readings not recorded after sampling was completed.

** Top of pump/depth to bottom of well not recorded after initial recordings on 2/29/2016

Slight odor.

Effervescent.

Yellowish/gray in color.

Groundwater Monitoring Well Field Data Sheet

Date: 3/2/2016

Samplers: Jon Wilkinson, Mike Spurgeon

Site: Bridgeton SLF

Sample time: 0850

Well ID: PZ 106-SD

Static Water Level (ft below toc): 13.19

Final water level (ft below toc): ***

Purge Time Start: 0824

Top of pump (ft below toc): **

Initial Purge Volume: 4100

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
0836	4100	17.85	6.73	+/- 0.1	3410	+/- 10%	21.8	+/- 0.5	3.11		0.05		-144	
0840	5350	18.36	6.73	0.00	3560	-4.4	21.8	0.0	4.46		0.05		-139	
0844	6550	18.79	6.74	-0.01	3640	-2.25	21.7	0.1	154.20		0.04		-142	
0848	7800	19.01	6.74	0.00	3630	0.27	21.7	0.0	2.39		0.04		-145	

*Denotes stabilization parameters

Notes:

Purged and sampled using a bladder pump.

***Final water level readings not recorded after sampling was completed.

** Top of pump/depth to bottom of well not recorded after initial recordings on 2/29/2016

Very effervescent. Had difficulty with air bubbles in VOA vials.

Feezor duplicate.

Colorless. Little odor.

Groundwater Monitoring Well Field Data Sheet

Date: 3/4/2016

Samplers: Jon Wilkinson, Craig Hegna

Site: Bridgeton SLF

Sample time: 1430

Well ID: PZ 107-SS

Static Water Level (ft below toc): 30.81

Final water level (ft below toc): 76.87

Purge Time Start: 1355

Top of pump (ft below toc): NA

Initial Purge Volume: 3000

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
1408	3000		6.78	+/- 0.1	2220	+/- 10%	13.2	+/- 0.5	128.60		2.15		-41	
1412	3450		6.77	0.01	2220	0	12.8	0.4	84.69		1.98		-37	
1416	3980		6.77	0.00	2220	0	12.4	0.4	56.72		1.61		-40	
1420	5250		6.75	0.02	2220	0	14.9	2.5	30.36		0.44		-67	
1424	6320		6.75	0.00	2210	0.45	14.7	0.2	20.11		0.35		-71	
1428	7550		6.74	0.01	2220	-0.45	14.5	0.2	13.94		0.30		-78	

*Denotes stabilization parameters

Notes:

Purged and sampled using a Waterra pump

Sample cloudy

Temperature fluctuated with speed of pump.

** Depth to bottom of well not recorded after initial recordings on 2/29/2016

Groundwater Monitoring Well Field Data Sheet

Date: 3/3/2016

Samplers: Jon Wilkinson, Craig Hegna

Site: Bridgeton SLF

Sample time: 1400

Well ID: PZ 116-SS

Static Water Level (ft below toc): 15.90

Final water level (ft below toc): ***

Purge Time Start: 1336

Top of pump (ft below toc): **

Initial Purge Volume: 3000

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
1346	3000	22.44	7.55	+/- 0.1	629	+/- 10%	21.4	+/- 0.5	1.36		1.36		23	
1350	4150	24.67	7.54	0.01	625	0.64	21.4	0.0	0.12		1.39		26	
1354	5400	27.11	7.54	0.00	621	0.64	21.4	0.0	0.09		1.40		40	
1358	6660	29.58	7.55	-0.01	618	0.48	21.4	0.0	0.41		1.37		45	

*Denotes stabilization parameters

Notes:

Purged and sampled using a bladder pump.

***Final water level readings not recorded after sampling was completed.

** Top of pump/depth to bottom of well not recorded after initial recordings on 2/29/2016

DNR duplicate sample collected.

Groundwater Monitoring Well Field Data Sheet

Date: 3/8/2016
Samplers: Jon Wilkinson, Craig Hegna
Site: Bridgeton SLF
Sample time: 1255
Well ID: PZ 200-SS
Static Water Level (ft below toc): 20.50
Final water level (ft below toc): 20.81
Purge Time Start: 1228
Top of pump (ft below toc): NA
Initial Purge Volume: 3500
Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
1240	3500		6.28	+/- 0.1	2720	+/- 10%	17.3	+/- 0.5	117.10		1.30		-60	
1244	4930		6.21	0.07	2690	1.1	17.4	0.1	76.17		1.00		-57	
1248	6140		6.20	0.01	2650	1.49	17.2	0.2	41.77		0.81		-57	
1252	7330		6.19	0.01	2620	1.13	17.3	0.1	38.68		0.67		-58	

*Denotes stabilization parameters

Notes:

** Depth to bottom of well not recorded after initial recordings on 2/29/2016

Purged and sampled using a Waterra pump

An additional cubie for radiological parameters field filtered at this site.

Sample became gray in color and had particulates as purging continued.

Groundwater Monitoring Well Field Data Sheet

Date: 3/3/2016

Samplers: Jon Wilkinson, Mike Spurgeon, Craig Hegna

Site: Bridgeton SLF

Sample time: 1105

Well ID: PZ 201A-SS

Static Water Level (ft below toc): 9.80

Final water level (ft below toc): ***

Purge Time Start: 1046

Top of pump (ft below toc): **

Initial Purge Volume: 1750

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
1053	1750	14.01	7.22	+/- 0.1	789	+/- 10%	15.1	+/- 0.5	15.41		1.42		22	
1057	2650	15.53	7.22	0.00	789	0	15.1	0.0	6.05		1.36		27	
1101	3960	18.57	7.21	0.01	776	1.65	15.3	0.2	5.75		1.42		28	
1105	5350	21.43	7.21	0.00	775	0.13	15.5	0.2	2.99		1.55		34	

*Denotes stabilization parameters

Notes:

Purged and sampled using a bladder pump.

***Final water level readings not recorded after sampling was completed.

** Top of pump/depth to bottom of well not recorded after initial recordings on 2/29/2016

Groundwater Monitoring Well Field Data Sheet

Date: 3/3/2016

Samplers: Jon Wilkinson, Mike Spurgeon

Site: Bridgeton SLF

Sample time: 0855

Well ID: PZ 202-SS

Static Water Level (ft below toc): 11.64

Final water level (ft below toc): ***

Purge Time Start: 0833

Top of pump (ft below toc): **

Initial Purge Volume: 1750

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
0840	1750	11.74	6.64	+/- 0.1	5180	+/- 10%	14.7	+/- 0.5	20.97		0.64		-71	
0844	2950	11.71	6.64	0.00	5290	-2.12	14.5	0.2	15.78		0.16		-117	
0848	4250	11.65	6.64	0.00	5320	-0.57	14.4	0.1	9.04		0.45		-121	
0852	6000	11.69	6.64	0.00	5310	0.19	14.6	0.2	7.84		0.20		-122	

*Denotes stabilization parameters

Notes:

Purged and sampled using a bladder pump.

***Final water level readings not recorded after sampling was completed.

** Top of pump/depth to bottom of well not recorded after initial recordings on 2/29/2016

Groundwater Monitoring Well Field Data Sheet

Date: 3/7/2016

Samplers: Jon Wilkinson, Craig Hegna

Site: Bridgeton SLF

Sample time: 1439

Well ID: PZ 203-SS

Static Water Level (ft below toc): 24.87

Final water level (ft below toc): 25.85

Purge Time Start: 1414

Top of pump (ft below toc): NA

Initial Purge Volume: 3500

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
1425	3500		7.01	+/- 0.1	772	+/- 10%	17.4	+/- 0.5	14.63		2.30		-83	
1429	4560		7.01	0.00	773	-0.13	17.1	0.3	14.60		1.98		-71	
1433	5650		7.02	-0.01	769	0.52	16.6	0.5	17.80		1.54		-69	
1437	6840		7.02	0.00	766	0.39	17.1	0.5	8.81		1.27		-70	

*Denotes stabilization parameters

Notes:

Purged and sampled using a Waterra pump

** Depth to bottom of well not recorded after initial recordings on 2/29/2016

Clear and colorless.

Groundwater Monitoring Well Field Data Sheet

Date: 3/2/2016

Samplers: Jon Wilkinson, Mike Spurgeon

Site: Bridgeton SLF

Sample time: 1435

Well ID: PZ 205-SS

Static Water Level (ft below toc): 29.02

Final water level (ft below toc): ***

Purge Time Start: 1416

Top of pump (ft below toc): **

Initial Purge Volume: 1500

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
1420	1500	32.93	7.09	+/- 0.1	853	+/- 10%	17.5	+/- 0.5	5.78		1.67		58	
1424	3100	36.56	7.09	0.00	863	-1.17	17.5	0.0	4.32		1.26		64	
1428	4700	39.43	7.08	0.01	863	0	17.5	0.0	3.23		1.16		62	
1432	6300	42.53	7.08	0.00	864	-0.12	17.6	0.1	2.87		1.16		66	

*Denotes stabilization parameters

Notes:

Purged and sampled using a bladder pump.

***Final water level readings not recorded after sampling was completed.

** Top of pump/depth to bottom of well not recorded after initial recordings on 2/29/2016

Groundwater Monitoring Well Field Data Sheet

Date: 3/9/2016
Samplers: Jon Wilkinson, Craig Hegna
Site: Bridgeton SLF
Sample time: 0840
Well ID: PZ 206-SS
Static Water Level (ft below toc): 27.33
Final water level (ft below toc): 44.02
Purge Time Start: 0809
Top of pump (ft below toc): NA
Initial Purge Volume: 4250
Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
0826	4250		6.94	+/- 0.1	1290	+/- 10%	18.2	+/- 0.5	40.78		2.39		-72	
0830	5180		6.94	0.00	1313	-1.78	18.1	0.1	35.53		1.93		-76	
0834	6500		6.94	0.00	1311	0.15	18.1	0.0	19.87		1.52		-79	
0838	7360		6.93	0.01	1300	0.84	17.7	0.4	21.10		0.97		-81	

*Denotes stabilization parameters

Notes:

** Depth to bottom of well not recorded after initial recordings on 2/29/2016
Purged and sampled using a Waterra pump. Pump tubing installed on Thursday, March 3, 2016.
Clear, colorless, with slight sulfur odor.

Groundwater Monitoring Well Field Data Sheet

Date: 3/7/2016

Samplers: Jon Wilkinson, Craig Hegna

Site: Bridgeton SLF

Sample time: 1005

Well ID: PZ 212-SS

Static Water Level (ft below toc): 9.61

Final water level (ft below toc): ***

Purge Time Start: 0942

Top of pump (ft below toc): **

Initial Purge Volume: 2000

Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
0951	2000	13.97	7.26	+/- 0.1	839	+/- 10%	13.9	+/- 0.5	39.32		0.37		-12	
0955	3050	15.94	7.25	0.01	823	1.91	14.0	0.1	60.08		0.24		-18	
0959	4120	17.75	7.25	0.00	817	0.73	14.1	0.1	67.22		0.19		-22	
1003	5150	19.70	7.24	0.01	815	0.24	14.1	0.0	73.09		0.16		-22	

*Denotes stabilization parameters

Notes:

Purged and sampled using a bladder pump.

***Final water level readings not recorded after sampling was completed.

** Top of pump/depth to bottom of well not recorded after initial recordings on 2/29/2016

Light tan in color, no odor.

Groundwater Monitoring Well Field Data Sheet

Date: 3/7/2016
Samplers: Jon Wilkinson, Craig Hegna
Site: Bridgeton SLF
Sample time: 0842
Well ID: PZ 212-SD
Static Water Level (ft below toc): 14.21
Final water level (ft below toc): ***
Purge Time Start: 0822
Top of pump (ft below toc): **
Initial Purge Volume: 1800
Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
0827	1800	18.00	7.29	+/- 0.1	1353	+/- 10%	14.2	+/- 0.5	32.47		0.43		-109	
0831	3150	20.58	7.35	-0.06	1276	5.69	14.1	0.1	52.33		0.23		-132	
0835	4450	22.96	7.36	-0.01	1229	3.68	14.1	0.0	53.47		0.17		-151	
0839	5760	23.12	7.37	-0.01	1220	0.73	14.1	0.0	12.64		0.15		-163	

*Denotes stabilization parameters

Notes:

Purged and sampled using a bladder pump.

***Final water level readings not recorded after sampling was completed.

** Top of pump/depth to bottom of well not recorded after initial recordings on 2/29/2016

Sample clear with slight sulfur odor.

Groundwater Monitoring Well Field Data Sheet

Date: 3/7/2016
Samplers: Jon Wilkinson, Craig Hegna
Site: Bridgeton SLF
Sample time: 1255
Well ID: MW 1204
Static Water Level (ft below toc): 14.25
Final water level (ft below toc): 28.37
Purge Time Start: 1217
Top of pump (ft below toc): NA
Initial Purge Volume: 8250
Well bottom (ft below toc): **

Stabilization Readings:

Time	Purge volume (mL)	Water level (ft below toc)	pH*	ΔpH	SC * (µS/cm)	ΔSC (%)	Temp* (°C)	ΔTemp (°C)	Turbidity (NTU)	ΔTurbidity (NTU)	DO (mg/L)	ΔDO	ORP (mV)	ΔORP
1241	8250		6.45	+/- 0.1	7930	+/- 10%	22.2	+/- 0.5	>1100		0.04		-199	
1245	10490		6.32	0.13	5260	33.67	22.5	0.3	>1100		0.03		-173	
1249	12240		6.28	0.04	5090	3.23	22.0	0.5	63.06		0.02		-166	
1253	14100		6.27	0.01	5080	0.2	22.0	0.0	46.04		0.02		-170	

*Denotes stabilization parameters

Notes:

Purged and sampled using a Waterra pump

** Depth to bottom of well not recorded after initial recordings on 2/29/2016

Purge water black and very effervescent/foamy.

Turbidimeter could not read through the sample cell on some aliquots so listed as >1100

Conductivity probe had difficulty reading due to the amount of air passing through flow cell.

Feezor collected a duplicate at this site.

VOA vials rinsed of preservative before filling due to effervescence. Some air bubbles were still present in VOA vials.

Color changed to dark tan while filling containers. Still very foamy.

Many particulates came through at various times.

APPENDIX D

Photographs

Landfill Monitoring Report
Bridgeton Sanitary Landfill
St. Louis County
February 29 – March 9, 2016

LCS-1D

LCS-2D

LCS-3D

LCS-4B

LCS-5A

LCS-6B

MW-1204

PZ-100-SD

PZ-100-SS

PZ-101-SS

PZ-102R-SS

PZ-102-SS

PZ-103-SS

PZ-104-SD

PZ-104-SS

PZ-105-SS

PZ-106-SD

PZ-106-SS

PZ-107-SS

PZ-109-SS

PZ-110-SS

PZ-111-SD

PZ-116-SS

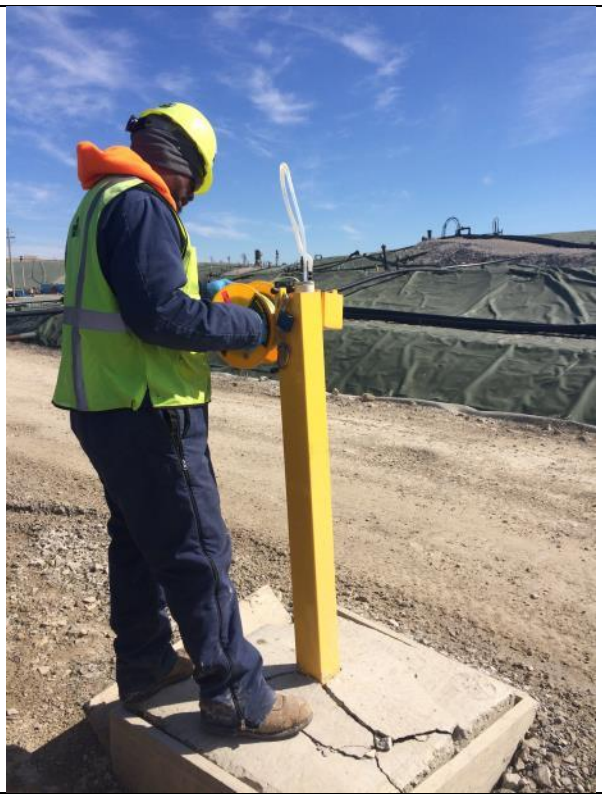
PZ-200-SS (GMP-7)

PZ-201A-SS

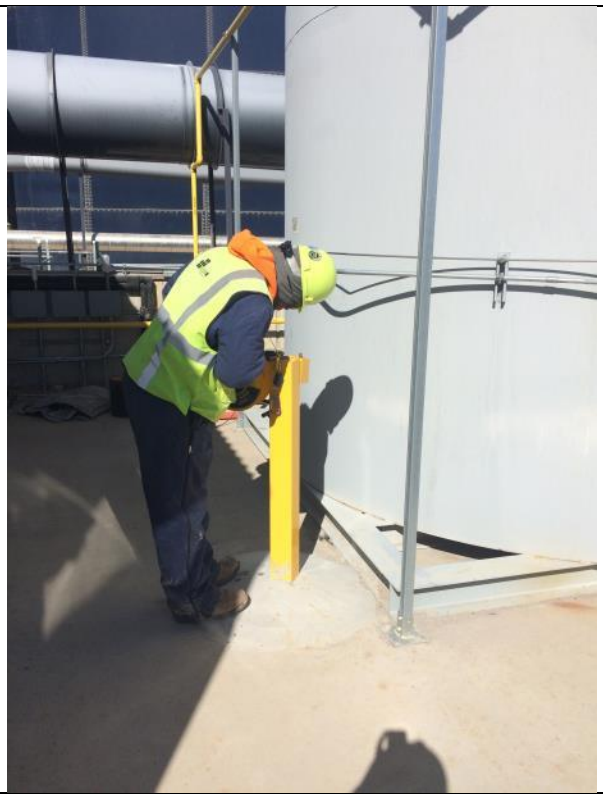
PZ-202-SS

PZ-203-SS

PZ-204-SS



PZ-205-SS



PZ-206-SS

PZ-208-SS

PZ-209-SD (foreground) & PZ-209-SS (background)

PZ-210-SD (foreground) & PZ-210-SS (background)	PZ-211-SD (foreground) & PZ-211-SS (background)
PZ-212-SD (foreground)& PZ-212-SS (background)	

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4/11/2016 6:32:32 PM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 160-16308-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Missouri Attorney General's Office

Project: Groundwater Samples

Report Number: 160-16308-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica St. Louis attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 03/01/2016; the samples arrived in good condition, and properly preserved. The temperatures of the 2 coolers at receipt time were 17.6º C and 18.4º C.

VOLATILE ORGANIC COMPOUNDS (GC MS)
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2), PZ-104-SS (160-16308-3), TRIPBLANK (160-16308-4) and TRIPBLANK (160-16308-5) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 03/04/2016 and 03/10/2016.

Analytical Batch: 239097
The following compounds did not meet the minimum relative response factor limits in the continuing calibration verification (CCV) associated with batch 160-239097: 2-Butanone and Acetone. A low level CCV was analyzed at the base reporting limit of 5ug/L and the affected analytes were detected. Affected target analytes recovering above the reporting limit will be qualified and reported. (CCVIS 160-239097/5)

The following sample was analyzed at reduced volume due to high concentrations of target analytes: PZ-104-SD (160-16308-2). The reporting limits have been elevated by the appropriate factor.

Job ID: 160-16308-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

Analytical Batch: 239802
The following compounds did not meet the minimum relative response factor limits in the continuing calibration verification (CCV) associated with batch 160-239802: Acetone and Methyl Ethyl Ketone. A low-level LOQV was analyzed at the reporting limit (5ug/L) and the affected analytes were detected. The only associated sample is a dilute re-analysis for Benzene.
(CCVIS 160-239802/3)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC MS)
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for semivolatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 03/07/2016 and 03/09/2016 and analyzed on 03/16/2016 and 03/29/2016.

Prep Batch: 239422
Di-n-butyl phthalate was detected in method blank MB 160-239422/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Prep Batch: 239800
Di-n-butyl phthalate was detected in method blank MB 160-239800/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Analytical Batch: 240637
Famphur recovered outside initial calibration criteria at 102.6 % RSD. The ICV recovered low at 77.9 %D. The CCV recovered low at 74.2 %D. Hexachlorophene recovered outside the initial calibration at 56.4 % RSD. These compounds are poor responding compounds and will be estimated in the samples associated with this calibration. The data is reported with this narrative.
(CCV 160-240637/4), (LCS 160-239422/2-A), (LCSD 160-239422/3-A) and (MB 160-239422/1-A)

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 160-239422 and analytical batch 160-240637 recovered outside acceptance limits. The RPD failed between the LCS/LCSD. There was insufficient sample to perform a re-extraction; therefore, the data have been reported. (LCS 160-239422/2-A) and (LCSD 160-239422/3-A)

Surrogate recovery for the following samples and QC was outside of acceptance limits: (LCS 160-239422/2-A), (LCSD 160-239422/3-A) and (MB 160-239422/1-A). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Analytical Batch: 240800
Famphur recovered outside initial calibration criteria at 102.6 % RSD. The ICV recovered low at 77.9 %D. The CCV recovered low at 78.2 %D. Hexachlorophene recovered outside the initial calibration at 56.4 % RSD. Hexachlorophene recovered low in the CCV at 24.6 %D. These compounds are poor responding compounds and will be estimated in the samples associated with this calibration. The data is reported with this narrative.
(CCV 160-240800/4) and (CCV 160-240800/7)

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 160-239800 and analytical batch 160-240800 recovered outside acceptance limits. The RPD failed between the LCS/LCSD. There was insufficient sample to perform a re-extraction; therefore, the data have been reported. (LCS 160-239800/2-A) and (LCSD 160-239800/3-A)

Surrogate recovery for the following samples and QC was outside of acceptance limits: PZ-105-SS (160-16308-1), (LCS 160-239800/2-A), (LCSD 160-239800/3-A) and (MB 160-239800/1-A). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Analytical Batch: 242481
This reanalysis is for Kepone only.
PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2), PZ-104-SS (160-16308-3) and (MB 160-239800/1-A)

Job ID: 160-16308-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

Internal standard (ISTD) response for Acenapthene-d10 for the following sample was outside acceptance criteria: PZ-104-SD (160-16308-2). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

This analysis is for Kepone only. Due to the matrix of the samples, Kepone is not recovering in a CCV after analyzing one analytical batch. To minimize damage to the instrumentation, the client has been notified of the approach to inject once for this compound, and report with narration. The sample below injected 1 minute outside the 12 hour clock window. The data is reported with this narrative.
PZ-104-SS (160-16308-3)

Organic Prep

3510 8270 239422
Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 160-239422. An LCS/LCSD has been provided.

3510 8270 239800
Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 160-239800. An LCS/LCSD has been provided.

The following sample was prepared outside of preparation holding time due to sample could not be located to be prepped in hold. Once the sample was found, it was prepped less than 24hrs outside of 1x hold, and well within 2x hold: PZ-104-SS (160-16308-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 03/09/2016 and analyzed on 04/02/2016 and 04/06/2016.

Analytical Batch: 243457
The low level check standard recovery associated with batch 160-243457 is outside the acceptance criteria for the following analyte(s): boron. The CCVL bracketing the samples were within acceptable QC criteria therefore original results will be reported. (CRI 160-243457/20)

The following samples was diluted to bring the concentration of target analytes within the calibration range: PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2), PZ-104-SS (160-16308-3), (160-16308-G-1-B MS ^), (160-16308-G-1-C MSD) and (160-16308-G-1-A SD ^). Elevated reporting limits (RLs) are provided.

CaHard, MgHard, and Phosphorus were detected in method blank MB 160-239794/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Due to the high concentration of calcium and magnesium the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 160-239794 and analytical batch 160-243457 could not be evaluated for accuracy and precision. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details. The associated laboratory control sample (LCS) met acceptance criteria. (160-16308-G-1-B MS ^) and (160-16308-G-1-C MSD)

The initial calibration verification (ICV) result for batch 160-243457 was above the upper control limit for phosphorus. Sample results were below the reporting limit, and have been reported as qualified data. (ICV 160-243457/18)

Analytical Batch: 244889
The following samples was diluted to bring the concentration of target analytes within the calibration range: PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2), PZ-104-SS (160-16308-3), (160-16308-G-1-B MS ^), (160-16308-G-1-C MSD) and (160-16308-G-1-A SD ^). Elevated reporting limits (RLs) are provided.

Arsenic was detected in method blank MB 160-239794/1-A at a level that was above the method detection limit but below the reporting

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Laboratory: TestAmerica St. Louis (Continued)

limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 03/21/2016.

Analytical Batch: 241336
Due to the difficult matrix a dilution was required.
PZ-105-SS (160-16308-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 03/07/2016.

Analytical Batch: 239354
The following samples in TDS batch 160- 239354 were diluted to bring the concentration of target analytes within the calibration range: PZ-104-SD (160-16308-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS, ION CHROMATOGRAPHY
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for Anions, Ion Chromatography in accordance with EPA Method 300.0. The samples were analyzed on 03/22/2016 and 03/23/2016.

Analytical Batch: 241586
The following samples in Anion batch 160-241586 were diluted to bring the concentrations of target analytes within the calibration range: PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3). Elevated reporting limits (RLs) are provided.

The following matrix spike (MS) recovered outside control limits for Fluoride (114%) in Anion batch 160-241586: (160-16445-J-1 MS). Sample matrix interference is suspected, because the associated laboratory control sample (LCS) recovery was within acceptance limits. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

AMMONIA
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for ammonia in accordance with EPA Method 350.1. The samples were analyzed on 03/28/2016 and 03/29/2016.

Analytical Batch: 242771
The following samples in Ammonia analytical batch 160-242771 were diluted to bring the concentrations of the target analyte within the calibration range: PZ-104-SD (160-16308-2). Elevated reporting limits (RLs) are provided.

The following matrix spike (MS) in Ammonia analytical batch 160-242771 recovered outside control limits, at 114% recovery: (160-16344-D-1 MS). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN, NITRATE-NITRITE
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for Nitrogen, Nitrate-Nitrite in

Job ID: 160-16308-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

accordance with Method 353.1 Preserved. The samples were analyzed on 03/15/2016.

Analytical Batch: 240661
The matrix spike (MS) recoveries for the following samples in NO3-NO2 analytical batch 160-240661 were outside control limits: (160-16308-H-1 MS). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CHEMICAL OXYGEN DEMAND
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for chemical oxygen demand in accordance with EPA Method 410.4. The samples were prepared and analyzed on 03/09/2016.

Analytical Batch: 239798
The following samples in COD batch 160-239798 were diluted to bring the concentration of target analytes within the calibration range: PZ-104-SD (160-16308-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL ORGANIC CARBON
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for total organic carbon in accordance with EPA Method 415.1. The samples were analyzed on 03/23/2016 and 03/24/2016.

Analytical Batch: 242129
The following samples in TOC batch 160-242129 were diluted to bring the concentrations of the target analyte within the calibration range: PZ-104-SD (160-16308-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 (GFPC)-DISSOLVED
Samples PZ-105-SS (160-16308-1) and PZ-104-SD (160-16308-2) were analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were prepared on 03/08/2016 and analyzed on 03/30/2016.

Prep Batch: 239583
The following samples were prepared at a reduced aliquot due to sediment and discoloration in the sample: PZ-104-SD (160-16308-2).

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: PZ-105-SS (160-16308-1) and PZ-104-SD (160-16308-2). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 (GFPC)
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were prepared on 03/03/2016 and analyzed on 03/26/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228 (GFPC)-DISSOLVED
Samples PZ-105-SS (160-16308-1) and PZ-104-SD (160-16308-2) were analyzed for Radium-228 (GFPC)-Dissolved in accordance with EPA 904. The samples were prepared on 03/09/2016 and analyzed on 03/23/2016.

Prep Batch: 239662
Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: PZ-105-SS (160-16308-1) and PZ-104-SD (160-16308-2). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

Job ID: 160-16308-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

The following samples were prepared at a reduced aliquot due to sediment and discoloration in the sample: PZ-104-SD (160-16308-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228 (GFPC)
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for Radium-228 (GFPC) in accordance with EPA 904. The samples were prepared on 03/07/2016 and analyzed on 03/18/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRITIUM, TOTAL (LSC)
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for Tritium, Total (LSC) in accordance with USEPA 906.0. The samples were prepared on 03/21/2016 and analyzed on 03/22/2016.

Prep Batch: 241366
The matrix spike (MS) has a spike recovery (-29%) below the QC limit (67-130%). The tritium concentration in the original sample is greater than five (5) times the amount spiked, making the percent recovery information statistically invalid and therefore could not be evaluated for accuracy and precision. The data have been qualified and reported. PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2), PZ-104-SS (160-16308-3), (LCS 160-241366/2-A), (MB 160-241366/1-A), (160-16516-A-1-A), (160-16516-A-1-B DU), (160-16516-A-2-A) and (160-16516-A-2-B MS)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC THORIUM (ALPHA SPECTROMETRY)
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for Isotopic Thorium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 03/16/2016 and analyzed on 03/24/2016.

Prep Batch: 240784
Samples are yellow and smell like sulfur. A reduced aliquot was used to prevent matrix interference.
PZ-104-SD (160-16308-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples PZ-105-SS (160-16308-1), PZ-104-SD (160-16308-2) and PZ-104-SS (160-16308-3) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 03/16/2016 and analyzed on 03/23/2016.

Prep Batch: 240794
Samples are yellow and smell like sulfur. A reduced aliquot was used to prevent matrix interference.
PZ-104-SD (160-16308-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Lynn Milberg	Lab PM: Lambert-Sykes, Chenise Y	Carrier Tracking No(s):	COC No: 160-3809-1856.1
Client Contact: Brenna McDonald	Phone: (573)453-4329	E-Mail: chenise.lambert-sykes@testamericainc.com		Page: Page 1 of 1
Company: Missouri Attorney General's Office				Job #:
Address: PO BOX 899	Due Date Requested:			
City: Jefferson City	TAT Requested (days):			
State, Zip: MO, 65102				
Phone: 573-368-2163(Tel)	PO #: Purchase Order not required			
Email: brenna.mcdonald@dnr.mo.gov	WO #:			
Project Name: Groundwater Samples	Project #: 16005117			
Site: BRIDGETON LANDFILL	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1, 353.1_Pres, 410.4	160.1_Calcd, 300_ORGFM_28D	6010C, 7470A	415.1 - Total Organic Carbon	8260C - (MOD) OLM 4.2	8270D - (MOD) Appendix IX Semi-Volatiles	903.0, 904.0, A01R_Th, A01R_U	903.0, 904.0	906.0 - Tritium					Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	D	S	A	N	D	N	N						
PZ-105-SS	3/1/16	0950	G	Water	N		1	1	1	1	3	1	4	2	1						
PZ-104-SD	3/1/16	1258	G	Water	N		1	1	1	1	3	1	4	2	1						
PZ-104-SS	3/1/16	1500	G	Water	N		1	1	1	1	3	1	4	2	1						
TRIPBLANK	3/1/16	0800	G	Water	N						3										
TRIPBLANK	3/1/16	0800	G	Water	N						3										
				Water																	
				Water																	
				Water																	

160-16308 Chain of Custody

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☒ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Lynn Milberg	3/1/16 1636	DNR	[illegible]	3/1/16 1636	TA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-16308-1

Login Number: 16308
List Number: 1
Creator: McKinney, Gerrod E

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
E	Result exceeded calibration range.

HPLC/IC

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SL
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SL
300.0	Anions, Ion Chromatography	MCAWW	TAL SL
6010C	Metals (ICP)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL SL
350.1	Nitrogen, Ammonia	MCAWW	TAL SL
353.1 Preserved	Nitrogen, Nitrate-Nitrite	MCAWW	TAL SL
410.4	COD	MCAWW	TAL SL
415.1	TOC	MCAWW	TAL SL
903.0	Radium-226 (GFPC)	EPA	TAL SL
904.0	Radium-228 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Thorium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL

Protocol References:

DOE = U.S. Department of Energy

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-16308-1	PZ-105-SS	Water	03/01/16 09:50	03/01/16 16:36
160-16308-2	PZ-104-SD	Water	03/01/16 12:58	03/01/16 16:36
160-16308-3	PZ-104-SS	Water	03/01/16 15:00	03/01/16 16:36
160-16308-4	TRIPBLANK	Water	03/01/16 08:00	03/01/16 16:36
160-16308-5	TRIPBLANK	Water	03/01/16 08:00	03/01/16 16:36

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Client Sample ID: PZ-105-SS

Date Collected: 03/01/16 09:50
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/04/16 13:15	1
Acetonitrile	ND		50	7.3	ug/L			03/04/16 13:15	1
Acrolein	ND		50	3.1	ug/L			03/04/16 13:15	1
Acrylonitrile	ND		50	1.7	ug/L			03/04/16 13:15	1
Allyl chloride	ND		10	0.39	ug/L			03/04/16 13:15	1
Benzene	**2.2**	**J**	5.0	0.25	ug/L			03/04/16 13:15	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/04/16 13:15	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/04/16 13:15	1
Bromoform	ND		5.0	0.37	ug/L			03/04/16 13:15	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/04/16 13:15	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/04/16 13:15	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/04/16 13:15	1
Chloroethane	ND		10	0.38	ug/L			03/04/16 13:15	1
Chloroform	ND		5.0	0.15	ug/L			03/04/16 13:15	1
Chloroprene	ND		5.0	0.39	ug/L			03/04/16 13:15	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/04/16 13:15	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/04/16 13:15	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/04/16 13:15	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/04/16 13:15	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/04/16 13:15	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/04/16 13:15	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/04/16 13:15	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/04/16 13:15	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/04/16 13:15	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/04/16 13:15	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/04/16 13:15	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/04/16 13:15	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/04/16 13:15	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/04/16 13:15	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/04/16 13:15	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/04/16 13:15	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/04/16 13:15	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/04/16 13:15	1
2-Hexanone	ND		20	0.59	ug/L			03/04/16 13:15	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/04/16 13:15	1
Methacrylonitrile	ND		50	2.1	ug/L			03/04/16 13:15	1
Methyl bromide	ND		10	0.40	ug/L			03/04/16 13:15	1
Methyl chloride	ND		10	0.55	ug/L			03/04/16 13:15	1
Methylene bromide	ND		5.0	0.41	ug/L			03/04/16 13:15	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/04/16 13:15	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/04/16 13:15	1
Methyl iodide	ND		5.0	1.5	ug/L			03/04/16 13:15	1
Methyl methacrylate	ND		10	0.51	ug/L			03/04/16 13:15	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/04/16 13:15	1
Propionitrile	ND		50	2.4	ug/L			03/04/16 13:15	1
Styrene	ND		5.0	0.35	ug/L			03/04/16 13:15	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/04/16 13:15	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/04/16 13:15	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/04/16 13:15	1

Client Sample ID: PZ-105-SS

Date Collected: 03/01/16 09:50
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		5.0	1.0	ug/L			03/04/16 13:15	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/04/16 13:15	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/04/16 13:15	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/04/16 13:15	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/04/16 13:15	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/04/16 13:15	1
Trichloroethene	ND		5.0	0.29	ug/L			03/04/16 13:15	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/04/16 13:15	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/04/16 13:15	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/04/16 13:15	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/04/16 13:15	1
Xylenes, Total	ND		10	0.85	ug/L			03/04/16 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*71 - 139*		*03/04/16 13:15*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 121*		*03/04/16 13:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*76 - 121*		*03/04/16 13:15*	*1*
Toluene-d8 (Surr)	*106*		*80 - 129*		*03/04/16 13:15*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Acenaphthylene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Acetophenone	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2-Acetylaminofluorene	ND		94	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
4-Aminobiphenyl	ND		47	0.99	ug/L		03/07/16 16:12	03/16/16 22:03	1
Anthracene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Benzo[a]anthracene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Benzo[a]pyrene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Benzo[b]fluoranthene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Benzo[g,h,i]perylene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Benzo[k]fluoranthene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Benzyl alcohol	ND		9.4	2.8	ug/L		03/07/16 16:12	03/16/16 22:03	1
Bis(2-chloroethoxy)methane	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Bis(2-chloroethyl)ether	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
bis(2 chloro-1-methylethyl) ether	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Bis(2-ethylhexyl) phthalate	ND	*	9.4	1.8	ug/L		03/07/16 16:12	03/16/16 22:03	1
4-Bromophenyl phenyl ether	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Butyl benzyl phthalate	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
4-Chloroaniline	ND	*	9.4	1.9	ug/L		03/07/16 16:12	03/16/16 22:03	1
Chlorobenzilate	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
4-Chloro-3-methylphenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2-Chloronaphthalene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2-Chlorophenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
4-Chlorophenyl phenyl ether	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Chrysene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Diallate	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 22:03	1
Dibenz(a,h)anthracene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Dibenzofuran	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
3,3'-Dichlorobenzidine	ND	*	47	1.2	ug/L		03/07/16 16:12	03/16/16 22:03	1

Client Sample ID: PZ-105-SS

Date Collected: 03/01/16 09:50
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2,6-Dichlorophenol	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Diethyl phthalate	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Dimethoate	ND		19	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
3,3'-Dimethylbenzidine	ND		47	2.5	ug/L		03/07/16 16:12	03/16/16 22:03	1
2,4-Dimethylphenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Dimethyl phthalate	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Di-n-butyl phthalate	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
1,3-Dinitrobenzene	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
1,4-Dinitrobenzene	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
4,6-Dinitro-2-methylphenol	ND	*	9.4	1.2	ug/L		03/07/16 16:12	03/16/16 22:03	1
2,4-Dinitrophenol	ND		47	1.9	ug/L		03/07/16 16:12	03/16/16 22:03	1
2,4-Dinitrotoluene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2,6-Dinitrotoluene	ND	*	9.4	2.0	ug/L		03/07/16 16:12	03/16/16 22:03	1
Di-n-octyl phthalate	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Dinoseb	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 22:03	1
Diphenylamine	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Disulfoton	ND		47	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Ethyl methanesulfonate	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Famphur	ND		94	1.6	ug/L		03/07/16 16:12	03/16/16 22:03	1
Fluoranthene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Fluorene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Hexachlorobenzene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Hexachlorobutadiene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Hexachlorocyclopentadiene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Hexachloroethane	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Hexachlorophene	ND		240	9.4	ug/L		03/07/16 16:12	03/16/16 22:03	1
Hexachloropropene	ND		94	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Indeno[1,2,3-cd]pyrene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Isodrin	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Isophorone	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Isosafrole	ND		19	4.7	ug/L		03/07/16 16:12	03/16/16 22:03	1
Methapyrilene	ND		47	1.2	ug/L		03/07/16 16:12	03/16/16 22:03	1
3-Methylcholanthrene	ND		19	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Methyl methanesulfonate	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2-Methylnaphthalene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Methyl parathion	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2-Methylphenol	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
3 & 4 Methylphenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 22:03	1
Naphthalene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
1,4-Naphthoquinone	ND		47	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
1-Naphthylamine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2-Naphthylamine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2-Nitroaniline	ND		9.4	1.0	ug/L		03/07/16 16:12	03/16/16 22:03	1
3-Nitroaniline	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
4-Nitroaniline	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Nitrobenzene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
5-Nitro-o-toluidine	ND		19	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Client Sample ID: PZ-105-SS

Date Collected: 03/01/16 09:50
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrophenol	ND	*	9.4	1.4	ug/L		03/07/16 16:12	03/16/16 22:03	1
4-Nitrophenol	ND		9.4	1.9	ug/L		03/07/16 16:12	03/16/16 22:03	1
N-Nitrosodiethylamine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
N-Nitrosodimethylamine	ND		9.4	1.9	ug/L		03/07/16 16:12	03/16/16 22:03	1
N-Nitrosodi-n-butylamine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
N-Nitrosodi-n-propylamine	ND	*	9.4	1.4	ug/L		03/07/16 16:12	03/16/16 22:03	1
N-Nitrosomethylethylamine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
N-Nitrosomorpholine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
N-Nitrosopiperidine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
N-Nitrosopyrrolidine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
o,o',o''-Triethylphosphorothioate	ND		47	1.1	ug/L		03/07/16 16:12	03/16/16 22:03	1
o-Toluidine	ND		19	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Parathion	ND		47	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
p-Dimethylamino azobenzene	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Pentachlorobenzene	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Pentachloronitrobenzene	ND		47	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Pentachlorophenol	ND	*	47	1.2	ug/L		03/07/16 16:12	03/16/16 22:03	1
Phenacetin	ND		19	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Phenanthrene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Phenol	ND		9.4	1.9	ug/L		03/07/16 16:12	03/16/16 22:03	1
Phorate	ND		47	1.9	ug/L		03/07/16 16:12	03/16/16 22:03	1
p-Phenylene diamine	ND		94	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Pronamide	ND		19	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Pyrene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Safrole	ND		19	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
1,2,4,5-Tetrachlorobenzene	ND		9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2,3,4,6-Tetrachlorophenol	ND		47	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
Thionazin	ND		47	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
1,2,4-Trichlorobenzene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2,4,5-Trichlorophenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
2,4,6-Trichlorophenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1
1,3,5-Trinitrobenzene	ND		47	0.94	ug/L		03/07/16 16:12	03/16/16 22:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*4*	*X*	*43 - 108*	*03/07/16 16:12*	*03/16/16 22:03*	*1*
2-Fluorophenol (Surr)	*1*	*X*	*15 - 59*	*03/07/16 16:12*	*03/16/16 22:03*	*1*
Nitrobenzene-d5 (Surr)	*4*	*X*	*50 - 101*	*03/07/16 16:12*	*03/16/16 22:03*	*1*
Phenol-d5 (Surr)	*0.8*	*X*	*10 - 50*	*03/07/16 16:12*	*03/16/16 22:03*	*1*
Terphenyl-d14 (Surr)	*4*	*X*	*21 - 97*	*03/07/16 16:12*	*03/16/16 22:03*	*1*
2,4,6-Tribromophenol (Surr)	*2*	*X*	*37 - 120*	*03/07/16 16:12*	*03/16/16 22:03*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kepone	ND		94	19	ug/L		03/07/16 16:12	03/29/16 02:08	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.51**		0.10	0.010	mg/L			03/22/16 23:41	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Client Sample ID: PZ-105-SS

Date Collected: 03/01/16 09:50
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	52		20	2.0	mg/L			03/22/16 23:56	40
Chloride	57		8.0	0.80	mg/L			03/22/16 23:56	40

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		50	19	ug/L		03/09/16 13:27	04/02/16 03:02	5
Arsenic	ND		50	8.9	ug/L		03/09/16 13:27	04/06/16 17:14	5
Barium	180	J	250	11	ug/L		03/09/16 13:27	04/02/16 03:02	5
Beryllium	ND		25	1.4	ug/L		03/09/16 13:27	04/02/16 03:02	5
Boron	57	J ^	250	36	ug/L		03/09/16 13:27	04/02/16 03:02	5
Cadmium	ND		25	1.7	ug/L		03/09/16 13:27	04/02/16 03:02	5
CaHard	320000	B	5000	270	ug/L		03/09/16 13:27	04/02/16 03:02	5
Calcium	130000		5000	270	ug/L		03/09/16 13:27	04/02/16 03:02	5
Chromium	ND		50	17	ug/L		03/09/16 13:27	04/06/16 17:14	5
Cobalt	ND		250	14	ug/L		03/09/16 13:27	04/02/16 03:02	5
Copper	ND		130	11	ug/L		03/09/16 13:27	04/02/16 03:02	5
Iron	1500		500	64	ug/L		03/09/16 13:27	04/02/16 03:02	5
Lead	ND		50	3.0	ug/L		03/09/16 13:27	04/02/16 03:02	5
Magnesium	60		5.0	0.25	mg/L		03/09/16 13:27	04/02/16 03:02	5
Manganese	140		75	5.0	ug/L		03/09/16 13:27	04/02/16 03:02	5
MgHard	250000	B	5000	250	ug/L		03/09/16 13:27	04/02/16 03:02	5
Nickel	ND		0.20	0.013	mg/L		03/09/16 13:27	04/02/16 03:02	5
Phosphorus	ND	^	1300	69	ug/L		03/09/16 13:27	04/02/16 03:02	5
Selenium	ND		75	10	ug/L		03/09/16 13:27	04/02/16 03:02	5
Silver	ND		100	5.0	ug/L		03/09/16 13:27	04/02/16 03:02	5
Sodium	45000		5000	530	ug/L		03/09/16 13:27	04/02/16 03:02	5
Thallium	13	J	100	12	ug/L		03/09/16 13:27	04/02/16 03:02	5
Total Hardness	570000		25000	8700	ug/L		03/09/16 13:27	04/02/16 03:02	5
Vanadium	31	J	250	22	ug/L		03/09/16 13:27	04/02/16 03:02	5
Zinc	42	J	100	42	ug/L		03/09/16 13:27	04/02/16 03:02	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		6.0	1.8	ug/L		03/21/16 09:47	03/21/16 19:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	610		5.0	3.5	mg/L			03/07/16 08:39	1
Ammonia	ND		0.050	0.0083	mg/L			03/28/16 17:27	1
Nitrate/Nitrite	ND	F1	0.050	0.0047	mg/L			03/15/16 17:23	1
Chemical Oxygen Demand	ND		20	6.5	mg/L		03/09/16 09:08	03/09/16 13:45	1
Total Organic Carbon	1.3		1.0	0.35	mg/L			03/23/16 19:49	1

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.22		0.155	0.189	1.00	0.0961	pCi/L	03/03/16 13:33	03/26/16 18:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.9*		*40 - 110*	*03/03/16 13:33*	*03/26/16 18:44*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.15		0.154	0.186	1.00	0.103	pCi/L	03/08/16 12:46	03/30/16 07:50	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	95.7		40 - 110	03/08/16 12:46	03/30/16 07:50	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.426		0.268	0.271	1.00	0.411	pCi/L	03/07/16 10:18	03/18/16 09:46	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110	03/07/16 10:18	03/18/16 09:46	1
Y Carrier	84.5		40 - 110	03/07/16 10:18	03/18/16 09:46	1

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.490		0.245	0.249	1.00	0.360	pCi/L	03/09/16 08:31	03/23/16 12:08	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	95.7		40 - 110	03/09/16 08:31	03/23/16 12:08	1
Y Carrier	83.4		40 - 110	03/09/16 08:31	03/23/16 12:08	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	106	U	224	224	500	388	pCi/L	03/21/16 12:52	03/22/16 15:03	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.206		0.0962	0.0977	1.00	0.0602	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Thorium-229	83.4		30 - 110	03/16/16 09:50	03/24/16 18:20	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	1.44		0.247	0.275	1.00	0.0316	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-235/236	0.0656		0.0587	0.0589	1.00	0.0394	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-238	1.05		0.210	0.228	1.00	0.0316	pCi/L	03/16/16 09:50	03/23/16 12:15	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	85.9		30 - 110	03/16/16 09:50	03/23/16 12:15	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Client Sample ID: PZ-104-SD

Date Collected: 03/01/16 12:58
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/04/16 14:57	1
Acetonitrile	ND		50	7.3	ug/L			03/04/16 14:57	1
Acrolein	ND		50	3.1	ug/L			03/04/16 14:57	1
Acrylonitrile	ND		50	1.7	ug/L			03/04/16 14:57	1
Allyl chloride	ND		10	0.39	ug/L			03/04/16 14:57	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/04/16 14:57	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/04/16 14:57	1
Bromoform	ND		5.0	0.37	ug/L			03/04/16 14:57	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/04/16 14:57	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/04/16 14:57	1
Chlorobenzene	**2.8**	**J**	5.0	0.38	ug/L			03/04/16 14:57	1
Chloroethane	ND		10	0.38	ug/L			03/04/16 14:57	1
Chloroform	ND		5.0	0.15	ug/L			03/04/16 14:57	1
Chloroprene	ND		5.0	0.39	ug/L			03/04/16 14:57	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/04/16 14:57	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/04/16 14:57	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/04/16 14:57	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/04/16 14:57	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/04/16 14:57	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/04/16 14:57	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/04/16 14:57	1
1,4-Dichlorobenzene	**2.8**	**J**	5.0	0.35	ug/L			03/04/16 14:57	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/04/16 14:57	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/04/16 14:57	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/04/16 14:57	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/04/16 14:57	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/04/16 14:57	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/04/16 14:57	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/04/16 14:57	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/04/16 14:57	1
Ethylbenzene	**2.4**	**J**	5.0	0.30	ug/L			03/04/16 14:57	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/04/16 14:57	1
2-Hexanone	ND		20	0.59	ug/L			03/04/16 14:57	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/04/16 14:57	1
Methacrylonitrile	ND		50	2.1	ug/L			03/04/16 14:57	1
Methyl bromide	ND		10	0.40	ug/L			03/04/16 14:57	1
Methyl chloride	ND		10	0.55	ug/L			03/04/16 14:57	1
Methylene bromide	ND		5.0	0.41	ug/L			03/04/16 14:57	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/04/16 14:57	1
Methyl Ethyl Ketone	**15**	**J**	20	0.39	ug/L			03/04/16 14:57	1
Methyl iodide	ND		5.0	1.5	ug/L			03/04/16 14:57	1
Methyl methacrylate	ND		10	0.51	ug/L			03/04/16 14:57	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/04/16 14:57	1
Propionitrile	ND		50	2.4	ug/L			03/04/16 14:57	1
Styrene	ND		5.0	0.35	ug/L			03/04/16 14:57	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/04/16 14:57	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/04/16 14:57	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/04/16 14:57	1
Toluene	**6.3**		5.0	1.0	ug/L			03/04/16 14:57	1

Client Sample ID: PZ-104-SD

Date Collected: 03/01/16 12:58
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/04/16 14:57	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/04/16 14:57	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/04/16 14:57	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/04/16 14:57	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/04/16 14:57	1
Trichloroethene	ND		5.0	0.29	ug/L			03/04/16 14:57	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/04/16 14:57	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/04/16 14:57	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/04/16 14:57	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/04/16 14:57	1
Xylenes, Total	**16**		10	0.85	ug/L			03/04/16 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*71 - 139*		*03/04/16 14:57*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 121*		*03/04/16 14:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*76 - 121*		*03/04/16 14:57*	*1*
Toluene-d8 (Surr)	*103*		*80 - 129*		*03/04/16 14:57*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**490**		25	1.3	ug/L			03/10/16 03:25	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*71 - 139*		*03/10/16 03:25*	*5*
Dibromofluoromethane (Surr)	*99*		*80 - 121*		*03/10/16 03:25*	*5*
1,2-Dichloroethane-d4 (Surr)	*96*		*76 - 121*		*03/10/16 03:25*	*5*
Toluene-d8 (Surr)	*96*		*80 - 129*		*03/10/16 03:25*	*5*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Acenaphthylene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Acetophenone	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2-Acetylaminofluorene	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
4-Aminobiphenyl	ND		48	1.0	ug/L		03/07/16 16:12	03/16/16 22:37	1
Anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Benzo[a]anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Benzo[a]pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Benzo[b]fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Benzo[g,h,i]perylene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Benzo[k]fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Benzyl alcohol	ND		9.5	2.9	ug/L		03/07/16 16:12	03/16/16 22:37	1
Bis(2-chloroethoxy)methane	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Bis(2-chloroethyl)ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
bis(2 chloro-1-methylethyl) ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Bis(2-ethylhexyl) phthalate	ND	*	9.5	1.8	ug/L		03/07/16 16:12	03/16/16 22:37	1
4-Bromophenyl phenyl ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Butyl benzyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
4-Chloroaniline	ND	*	9.5	1.9	ug/L		03/07/16 16:12	03/16/16 22:37	1
Chlorobenzilate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1

Client Sample ID: PZ-104-SD

Date Collected: 03/01/16 12:58
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-2

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloro-3-methylphenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2-Chloronaphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2-Chlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
4-Chlorophenyl phenyl ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Chrysene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Diallate	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 22:37	1
Dibenz(a,h)anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Dibenzofuran	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
3,3'-Dichlorobenzidine	ND	*	48	1.2	ug/L		03/07/16 16:12	03/16/16 22:37	1
2,4-Dichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2,6-Dichlorophenol	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Diethyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Dimethoate	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
3,3'-Dimethylbenzidine	ND		48	2.5	ug/L		03/07/16 16:12	03/16/16 22:37	1
2,4-Dimethylphenol	**2.0**	**J ***	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Dimethyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Di-n-butyl phthalate	**3.4**	**J B ***	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
1,3-Dinitrobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
1,4-Dinitrobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
4,6-Dinitro-2-methylphenol	ND	*	9.5	1.2	ug/L		03/07/16 16:12	03/16/16 22:37	1
2,4-Dinitrophenol	ND		48	1.9	ug/L		03/07/16 16:12	03/16/16 22:37	1
2,4-Dinitrotoluene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2,6-Dinitrotoluene	ND	*	9.5	2.1	ug/L		03/07/16 16:12	03/16/16 22:37	1
Di-n-octyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Dinoseb	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 22:37	1
Diphenylamine	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Disulfoton	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Ethyl methanesulfonate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Famphur	ND		95	1.6	ug/L		03/07/16 16:12	03/16/16 22:37	1
Fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Fluorene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Hexachlorobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Hexachlorobutadiene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Hexachlorocyclopentadiene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Hexachloroethane	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Hexachlorophene	ND		240	9.5	ug/L		03/07/16 16:12	03/16/16 22:37	1
Hexachloropropene	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Indeno[1,2,3-cd]pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Isodrin	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Isophorone	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Isosafrole	ND		19	4.8	ug/L		03/07/16 16:12	03/16/16 22:37	1
Methapyrilene	ND		48	1.2	ug/L		03/07/16 16:12	03/16/16 22:37	1
3-Methylcholanthrene	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Methyl methanesulfonate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2-Methylnaphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Methyl parathion	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2-Methylphenol	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
3 & 4 Methylphenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 22:37	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Client Sample ID: PZ-104-SD

Date Collected: 03/01/16 12:58
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-2

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
1,4-Naphthoquinone	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
1-Naphthylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2-Naphthylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2-Nitroaniline	ND		9.5	1.0	ug/L		03/07/16 16:12	03/16/16 22:37	1
3-Nitroaniline	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
4-Nitroaniline	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Nitrobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
5-Nitro-o-toluidine	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2-Nitrophenol	ND	*	9.5	1.4	ug/L		03/07/16 16:12	03/16/16 22:37	1
4-Nitrophenol	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 22:37	1
N-Nitrosodiethylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
N-Nitrosodimethylamine	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 22:37	1
N-Nitrosodi-n-butylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
N-Nitrosodi-n-propylamine	ND	*	9.5	1.4	ug/L		03/07/16 16:12	03/16/16 22:37	1
N-Nitrosomethylethylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
N-Nitrosomorpholine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
N-Nitrosopiperidine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
N-Nitrosopyrrolidine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
o,o',o''-Triethylphosphorothioate	ND		48	1.1	ug/L		03/07/16 16:12	03/16/16 22:37	1
o-Toluidine	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Parathion	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
p-Dimethylamino azobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Pentachlorobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Pentachloronitrobenzene	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Pentachlorophenol	ND	*	48	1.2	ug/L		03/07/16 16:12	03/16/16 22:37	1
Phenacetin	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Phenanthrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Phenol	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 22:37	1
Phorate	ND		48	1.9	ug/L		03/07/16 16:12	03/16/16 22:37	1
p-Phenylene diamine	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Pronamide	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Safrole	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
1,2,4,5-Tetrachlorobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2,3,4,6-Tetrachlorophenol	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
Thionazin	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
1,2,4-Trichlorobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2,4,5-Trichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
2,4,6-Trichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1
1,3,5-Trinitrobenzene	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*48*		*43 - 108*	*03/07/16 16:12*	*03/16/16 22:37*	*1*
2-Fluorophenol (Surr)	*33*		*15 - 59*	*03/07/16 16:12*	*03/16/16 22:37*	*1*
Nitrobenzene-d5 (Surr)	*68*		*50 - 101*	*03/07/16 16:12*	*03/16/16 22:37*	*1*
Phenol-d5 (Surr)	*21*		*10 - 50*	*03/07/16 16:12*	*03/16/16 22:37*	*1*
Terphenyl-d14 (Surr)	*46*		*21 - 97*	*03/07/16 16:12*	*03/16/16 22:37*	*1*
2,4,6-Tribromophenol (Surr)	*100*		*37 - 120*	*03/07/16 16:12*	*03/16/16 22:37*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Client Sample ID: PZ-104-SD

Date Collected: 03/01/16 12:58
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-2

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kepone	ND		95	19	ug/L		03/07/16 16:12	03/29/16 02:39	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.58		0.10	0.010	mg/L			03/23/16 00:40	1
Sulfate	1.0		0.50	0.050	mg/L			03/23/16 00:40	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	350		40	4.0	mg/L			03/23/16 01:10	200

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		50	19	ug/L		03/09/16 13:27	04/02/16 03:20	5
Arsenic	15	J B	50	8.9	ug/L		03/09/16 13:27	04/06/16 17:45	5
Barium	690		250	11	ug/L		03/09/16 13:27	04/02/16 03:20	5
Beryllium	ND		25	1.4	ug/L		03/09/16 13:27	04/02/16 03:20	5
Boron	1200	^	250	36	ug/L		03/09/16 13:27	04/02/16 03:20	5
Cadmium	ND		25	1.7	ug/L		03/09/16 13:27	04/02/16 03:20	5
CaHard	350000	B	5000	270	ug/L		03/09/16 13:27	04/02/16 03:20	5
Calcium	140000		5000	270	ug/L		03/09/16 13:27	04/02/16 03:20	5
Chromium	21	J	50	17	ug/L		03/09/16 13:27	04/06/16 17:45	5
Cobalt	ND		250	14	ug/L		03/09/16 13:27	04/02/16 03:20	5
Copper	ND		130	11	ug/L		03/09/16 13:27	04/02/16 03:20	5
Iron	15000		500	64	ug/L		03/09/16 13:27	04/02/16 03:20	5
Lead	ND		50	3.0	ug/L		03/09/16 13:27	04/02/16 03:20	5
Magnesium	76		5.0	0.25	mg/L		03/09/16 13:27	04/02/16 03:20	5
Manganese	150		75	5.0	ug/L		03/09/16 13:27	04/02/16 03:20	5
MgHard	310000	B	5000	250	ug/L		03/09/16 13:27	04/02/16 03:20	5
Nickel	0.085	J	0.20	0.013	mg/L		03/09/16 13:27	04/02/16 03:20	5
Phosphorus	170	J ^ B	1300	69	ug/L		03/09/16 13:27	04/02/16 03:20	5
Selenium	ND		75	10	ug/L		03/09/16 13:27	04/02/16 03:20	5
Silver	ND		100	5.0	ug/L		03/09/16 13:27	04/02/16 03:20	5
Sodium	200000		5000	530	ug/L		03/09/16 13:27	04/02/16 03:20	5
Thallium	15	J	100	12	ug/L		03/09/16 13:27	04/02/16 03:20	5
Total Hardness	660000		25000	8700	ug/L		03/09/16 13:27	04/02/16 03:20	5
Vanadium	36	J	250	22	ug/L		03/09/16 13:27	04/02/16 03:20	5
Zinc	ND		100	42	ug/L		03/09/16 13:27	04/02/16 03:20	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 19:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite	ND		0.050	0.0047	mg/L			03/15/16 17:27	1

General Chemistry - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	1200		10	7.0	mg/L			03/07/16 08:39	2
Ammonia	56		2.5	0.41	mg/L			03/29/16 14:59	50

Client Sample ID: PZ-104-SD

Date Collected: 03/01/16 12:58
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-2

Matrix: Water

General Chemistry - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	360		200	65	mg/L		03/09/16 09:08	03/09/16 13:45	10

General Chemistry - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	110		10	3.5	mg/L			03/24/16 11:34	10

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.48		0.247	0.399	1.00	0.0591	pCi/L	03/03/16 13:33	03/26/16 18:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.2*		*40 - 110*	*03/03/16 13:33*	*03/26/16 18:49*	*1*

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.15		0.338	0.441	1.00	0.171	pCi/L	03/08/16 12:46	03/30/16 07:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*03/08/16 12:46*	*03/30/16 07:50*	*1*

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.46		0.354	0.379	1.00	0.442	pCi/L	03/07/16 10:18	03/18/16 09:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.2*		*40 - 110*	*03/07/16 10:18*	*03/18/16 09:46*	*1*
Y Carrier	*87.9*		*40 - 110*	*03/07/16 10:18*	*03/18/16 09:46*	*1*

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.23		0.457	0.471	1.00	0.621	pCi/L	03/09/16 08:31	03/23/16 12:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*03/09/16 08:31*	*03/23/16 12:09*	*1*
Y Carrier	*83.7*		*40 - 110*	*03/09/16 08:31*	*03/23/16 12:09*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	2210		422	465	500	388	pCi/L	03/21/16 12:52	03/22/16 15:26	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Client Sample ID: PZ-104-SD

Lab Sample ID: 160-16308-2
Date Collected: 03/01/16 12:58
Matrix: Water
Date Received: 03/01/16 16:36

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	**0.878**		0.347	0.354	1.00	0.280	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Thorium-229	*75.4*		*30 - 110*	*03/16/16 09:50*	*03/24/16 18:20*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0573	U	0.106	0.107	1.00	0.198	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-235/236	0.0178	U	0.0662	0.0663	1.00	0.169	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-238	0.00409	U	0.0569	0.0569	1.00	0.161	pCi/L	03/16/16 09:50	03/23/16 12:15	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*89.3*		*30 - 110*	*03/16/16 09:50*	*03/23/16 12:15*	*1*

Client Sample ID: PZ-104-SS

Lab Sample ID: 160-16308-3
Date Collected: 03/01/16 15:00
Matrix: Water
Date Received: 03/01/16 16:36

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/04/16 15:23	1
Acetonitrile	ND		50	7.3	ug/L			03/04/16 15:23	1
Acrolein	ND		50	3.1	ug/L			03/04/16 15:23	1
Acrylonitrile	ND		50	1.7	ug/L			03/04/16 15:23	1
Allyl chloride	ND		10	0.39	ug/L			03/04/16 15:23	1
Benzene	**6.9**		5.0	0.25	ug/L			03/04/16 15:23	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/04/16 15:23	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/04/16 15:23	1
Bromoform	ND		5.0	0.37	ug/L			03/04/16 15:23	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/04/16 15:23	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/04/16 15:23	1
Chlorobenzene	**1.4**	**J**	5.0	0.38	ug/L			03/04/16 15:23	1
Chloroethane	ND		10	0.38	ug/L			03/04/16 15:23	1
Chloroform	ND		5.0	0.15	ug/L			03/04/16 15:23	1
Chloroprene	ND		5.0	0.39	ug/L			03/04/16 15:23	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/04/16 15:23	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/04/16 15:23	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/04/16 15:23	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/04/16 15:23	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/04/16 15:23	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/04/16 15:23	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/04/16 15:23	1
1,4-Dichlorobenzene	**4.0**	**J**	5.0	0.35	ug/L			03/04/16 15:23	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/04/16 15:23	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/04/16 15:23	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/04/16 15:23	1

Client Sample ID: PZ-104-SS

Date Collected: 03/01/16 15:00
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/04/16 15:23	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/04/16 15:23	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/04/16 15:23	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/04/16 15:23	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/04/16 15:23	1
Ethylbenzene	**0.72**	**J**	5.0	0.30	ug/L			03/04/16 15:23	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/04/16 15:23	1
2-Hexanone	ND		20	0.59	ug/L			03/04/16 15:23	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/04/16 15:23	1
Methacrylonitrile	ND		50	2.1	ug/L			03/04/16 15:23	1
Methyl bromide	ND		10	0.40	ug/L			03/04/16 15:23	1
Methyl chloride	ND		10	0.55	ug/L			03/04/16 15:23	1
Methylene bromide	ND		5.0	0.41	ug/L			03/04/16 15:23	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/04/16 15:23	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/04/16 15:23	1
Methyl iodide	ND		5.0	1.5	ug/L			03/04/16 15:23	1
Methyl methacrylate	ND		10	0.51	ug/L			03/04/16 15:23	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/04/16 15:23	1
Propionitrile	ND		50	2.4	ug/L			03/04/16 15:23	1
Styrene	ND		5.0	0.35	ug/L			03/04/16 15:23	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/04/16 15:23	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/04/16 15:23	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/04/16 15:23	1
Toluene	ND		5.0	1.0	ug/L			03/04/16 15:23	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/04/16 15:23	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/04/16 15:23	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/04/16 15:23	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/04/16 15:23	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/04/16 15:23	1
Trichloroethene	ND		5.0	0.29	ug/L			03/04/16 15:23	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/04/16 15:23	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/04/16 15:23	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/04/16 15:23	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/04/16 15:23	1
Xylenes, Total	**14**		10	0.85	ug/L			03/04/16 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*71 - 139*		*03/04/16 15:23*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 121*		*03/04/16 15:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*76 - 121*		*03/04/16 15:23*	*1*
Toluene-d8 (Surr)	*102*		*80 - 129*		*03/04/16 15:23*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Acenaphthylene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Acetophenone	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2-Acetylaminofluorene	ND	H	95	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
4-Aminobiphenyl	ND	H	47	1.0	ug/L		03/09/16 14:36	03/16/16 20:23	1
Anthracene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1

Client Sample ID: PZ-104-SS

Date Collected: 03/01/16 15:00
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Benzo[a]pyrene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Benzo[b]fluoranthene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Benzo[g,h,i]perylene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Benzo[k]fluoranthene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Benzyl alcohol	ND	H	9.5	2.8	ug/L		03/09/16 14:36	03/16/16 20:23	1
Bis(2-chloroethoxy)methane	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Bis(2-chloroethyl)ether	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
bis(2 chloro-1-methylethyl) ether	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Bis(2-ethylhexyl) phthalate	ND	H *	9.5	1.8	ug/L		03/09/16 14:36	03/16/16 20:23	1
4-Bromophenyl phenyl ether	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Butyl benzyl phthalate	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
4-Chloroaniline	ND	H *	9.5	1.9	ug/L		03/09/16 14:36	03/16/16 20:23	1
Chlorobenzilate	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
4-Chloro-3-methylphenol	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2-Chloronaphthalene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2-Chlorophenol	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
4-Chlorophenyl phenyl ether	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Chrysene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Diallate	ND	H	19	1.9	ug/L		03/09/16 14:36	03/16/16 20:23	1
Dibenz(a,h)anthracene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Dibenzofuran	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
3,3'-Dichlorobenzidine	ND	H *	47	1.2	ug/L		03/09/16 14:36	03/16/16 20:23	1
2,4-Dichlorophenol	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2,6-Dichlorophenol	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Diethyl phthalate	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Dimethoate	ND	H	19	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
7,12-Dimethylbenz(a)anthracene	ND	H	19	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
3,3'-Dimethylbenzidine	ND	H	47	2.5	ug/L		03/09/16 14:36	03/16/16 20:23	1
2,4-Dimethylphenol	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Dimethyl phthalate	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Di-n-butyl phthalate	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
1,3-Dinitrobenzene	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
1,4-Dinitrobenzene	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
4,6-Dinitro-2-methylphenol	ND	H *	9.5	1.2	ug/L		03/09/16 14:36	03/16/16 20:23	1
2,4-Dinitrophenol	ND	H	47	1.9	ug/L		03/09/16 14:36	03/16/16 20:23	1
2,4-Dinitrotoluene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2,6-Dinitrotoluene	ND	H *	9.5	2.0	ug/L		03/09/16 14:36	03/16/16 20:23	1
Di-n-octyl phthalate	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Dinoseb	ND	H	19	1.9	ug/L		03/09/16 14:36	03/16/16 20:23	1
Diphenylamine	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Disulfoton	ND	H	47	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Ethyl methanesulfonate	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Famphur	ND	H	95	1.6	ug/L		03/09/16 14:36	03/16/16 20:23	1
Fluoranthene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Fluorene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Hexachlorobenzene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Hexachlorobutadiene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Hexachlorocyclopentadiene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1

Client Sample ID: PZ-104-SS

Date Collected: 03/01/16 15:00
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Hexachlorophene	ND	H	240	9.5	ug/L		03/09/16 14:36	03/16/16 20:23	1
Hexachloropropene	ND	H	95	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Indeno[1,2,3-cd]pyrene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Isodrin	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Isophorone	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Isosafrole	ND	H	19	4.7	ug/L		03/09/16 14:36	03/16/16 20:23	1
Methapyrilene	ND	H	47	1.2	ug/L		03/09/16 14:36	03/16/16 20:23	1
3-Methylcholanthrene	ND	H	19	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Methyl methanesulfonate	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2-Methylnaphthalene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Methyl parathion	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2-Methylphenol	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
3 & 4 Methylphenol	ND	H *	19	1.9	ug/L		03/09/16 14:36	03/16/16 20:23	1
Naphthalene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
1,4-Naphthoquinone	ND	H	47	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
1-Naphthylamine	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2-Naphthylamine	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2-Nitroaniline	ND	H *	9.5	1.0	ug/L		03/09/16 14:36	03/16/16 20:23	1
3-Nitroaniline	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
4-Nitroaniline	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Nitrobenzene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
5-Nitro-o-toluidine	ND	H	19	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2-Nitrophenol	ND	H *	9.5	1.4	ug/L		03/09/16 14:36	03/16/16 20:23	1
4-Nitrophenol	ND	H *	9.5	1.9	ug/L		03/09/16 14:36	03/16/16 20:23	1
N-Nitrosodiethylamine	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
N-Nitrosodimethylamine	ND	H	9.5	1.9	ug/L		03/09/16 14:36	03/16/16 20:23	1
N-Nitrosodi-n-butylamine	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
N-Nitrosodi-n-propylamine	ND	H *	9.5	1.4	ug/L		03/09/16 14:36	03/16/16 20:23	1
N-Nitrosomethylethylamine	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
N-Nitrosomorpholine	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
N-Nitrosopiperidine	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
N-Nitrosopyrrolidine	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
o,o',o''-Triethylphosphorothioate	ND	H	47	1.1	ug/L		03/09/16 14:36	03/16/16 20:23	1
o-Toluidine	ND	H	19	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Parathion	ND	H	47	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
p-Dimethylamino azobenzene	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Pentachlorobenzene	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Pentachloronitrobenzene	ND	H	47	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Pentachlorophenol	ND	H *	47	1.2	ug/L		03/09/16 14:36	03/16/16 20:23	1
Phenacetin	ND	H	19	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Phenanthrene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Phenol	ND	H	9.5	1.9	ug/L		03/09/16 14:36	03/16/16 20:23	1
Phorate	ND	H	47	1.9	ug/L		03/09/16 14:36	03/16/16 20:23	1
p-Phenylene diamine	ND	H	95	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Pronamide	ND	H	19	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Pyrene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Safrole	ND	H	19	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
1,2,4,5-Tetrachlorobenzene	ND	H	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1

Client Sample ID: PZ-104-SS

Date Collected: 03/01/16 15:00
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	ND	H	47	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
Thionazin	ND	H	47	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
1,2,4-Trichlorobenzene	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2,4,5-Trichlorophenol	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
2,4,6-Trichlorophenol	ND	H *	9.5	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1
1,3,5-Trinitrobenzene	ND	H	47	0.95	ug/L		03/09/16 14:36	03/16/16 20:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*82*		*43 - 108*	*03/09/16 14:36*	*03/16/16 20:23*	*1*
2-Fluorophenol (Surr)	*32*		*15 - 59*	*03/09/16 14:36*	*03/16/16 20:23*	*1*
Nitrobenzene-d5 (Surr)	*89*		*50 - 101*	*03/09/16 14:36*	*03/16/16 20:23*	*1*
Phenol-d5 (Surr)	*17*		*10 - 50*	*03/09/16 14:36*	*03/16/16 20:23*	*1*
Terphenyl-d14 (Surr)	*91*		*21 - 97*	*03/09/16 14:36*	*03/16/16 20:23*	*1*
2,4,6-Tribromophenol (Surr)	*102*		*37 - 120*	*03/09/16 14:36*	*03/16/16 20:23*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kepone	ND	H	95	19	ug/L		03/09/16 14:36	03/29/16 03:09	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.82**		0.10	0.010	mg/L			03/23/16 01:25	1
Chloride	**4.1**		0.20	0.020	mg/L			03/23/16 01:25	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**19**		10	1.0	mg/L			03/23/16 01:40	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		50	19	ug/L		03/09/16 13:27	04/02/16 03:38	5
Arsenic	ND		50	8.9	ug/L		03/09/16 13:27	04/06/16 17:50	5
Barium	**110**	**J**	250	11	ug/L		03/09/16 13:27	04/02/16 03:38	5
Beryllium	ND		25	1.4	ug/L		03/09/16 13:27	04/02/16 03:38	5
Boron	**140**	**J ^**	250	36	ug/L		03/09/16 13:27	04/02/16 03:38	5
Cadmium	ND		25	1.7	ug/L		03/09/16 13:27	04/02/16 03:38	5
CaHard	**240000**	**B**	5000	270	ug/L		03/09/16 13:27	04/02/16 03:38	5
Calcium	**95000**		5000	270	ug/L		03/09/16 13:27	04/02/16 03:38	5
Chromium	ND		50	17	ug/L		03/09/16 13:27	04/06/16 17:50	5
Cobalt	ND		250	14	ug/L		03/09/16 13:27	04/02/16 03:38	5
Copper	ND		130	11	ug/L		03/09/16 13:27	04/02/16 03:38	5
Iron	**620**		500	64	ug/L		03/09/16 13:27	04/02/16 03:38	5
Lead	ND		50	3.0	ug/L		03/09/16 13:27	04/02/16 03:38	5
Magnesium	**51**		5.0	0.25	mg/L		03/09/16 13:27	04/02/16 03:38	5
Manganese	**27**	**J**	75	5.0	ug/L		03/09/16 13:27	04/02/16 03:38	5
MgHard	**210000**	**B**	5000	250	ug/L		03/09/16 13:27	04/02/16 03:38	5
Nickel	ND		0.20	0.013	mg/L		03/09/16 13:27	04/02/16 03:38	5
Phosphorus	ND	^	1300	69	ug/L		03/09/16 13:27	04/02/16 03:38	5
Selenium	ND		75	10	ug/L		03/09/16 13:27	04/02/16 03:38	5
Silver	ND		100	5.0	ug/L		03/09/16 13:27	04/02/16 03:38	5
Sodium	**15000**		5000	530	ug/L		03/09/16 13:27	04/02/16 03:38	5

Client Sample ID: PZ-104-SS

Date Collected: 03/01/16 15:00
Date Received: 03/01/16 16:36

Lab Sample ID: 160-16308-3

Matrix: Water

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		100	12	ug/L		03/09/16 13:27	04/02/16 03:38	5
Total Hardness	**450000**		25000	8700	ug/L		03/09/16 13:27	04/02/16 03:38	5
Vanadium	ND		250	22	ug/L		03/09/16 13:27	04/02/16 03:38	5
Zinc	ND		100	42	ug/L		03/09/16 13:27	04/02/16 03:38	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 19:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	**450**		5.0	3.5	mg/L			03/07/16 08:39	1
Ammonia	**0.047**	**J**	0.050	0.0083	mg/L			03/29/16 15:01	1
Nitrate/Nitrite	ND		0.050	0.0047	mg/L			03/15/16 17:28	1
Chemical Oxygen Demand	ND		20	6.5	mg/L		03/09/16 09:08	03/09/16 13:45	1
Total Organic Carbon	**1.3**		1.0	0.35	mg/L			03/23/16 20:43	1

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.32**		0.156	0.196	1.00	0.0709	pCi/L	03/03/16 13:33	03/26/16 18:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.9*		*40 - 110*	*03/03/16 13:33*	*03/26/16 18:49*	*1*

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.299	U	0.288	0.289	1.00	0.466	pCi/L	03/07/16 10:18	03/18/16 09:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.9*		*40 - 110*	*03/07/16 10:18*	*03/18/16 09:47*	*1*
Y Carrier	*81.5*		*40 - 110*	*03/07/16 10:18*	*03/18/16 09:47*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	91.9	U	221	222	500	388	pCi/L	03/21/16 12:52	03/22/16 15:49	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	**0.271**		0.118	0.120	1.00	0.0879	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Thorium-229	*73.3*		*30 - 110*	*03/16/16 09:50*	*03/24/16 18:20*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Client Sample ID: PZ-104-SS

Lab Sample ID: 160-16308-3
Date Collected: 03/01/16 15:00
Matrix: Water
Date Received: 03/01/16 16:36

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**1.28**		0.223	0.248	1.00	0.0534	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-235/236	0.0120	U	0.0240	0.0241	1.00	0.0361	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-238	**0.733**		0.168	0.179	1.00	0.0289	pCi/L	03/16/16 09:50	03/23/16 12:15	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*91.7*		*30 - 110*	*03/16/16 09:50*	*03/23/16 12:15*	*1*

Client Sample ID: TRIPBLANK

Lab Sample ID: 160-16308-4
Date Collected: 03/01/16 08:00
Matrix: Water
Date Received: 03/01/16 16:36

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/04/16 15:48	1
Acetonitrile	ND		50	7.3	ug/L			03/04/16 15:48	1
Acrolein	ND		50	3.1	ug/L			03/04/16 15:48	1
Acrylonitrile	ND		50	1.7	ug/L			03/04/16 15:48	1
Allyl chloride	ND		10	0.39	ug/L			03/04/16 15:48	1
Benzene	ND		5.0	0.25	ug/L			03/04/16 15:48	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/04/16 15:48	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/04/16 15:48	1
Bromoform	ND		5.0	0.37	ug/L			03/04/16 15:48	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/04/16 15:48	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/04/16 15:48	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/04/16 15:48	1
Chloroethane	ND		10	0.38	ug/L			03/04/16 15:48	1
Chloroform	ND		5.0	0.15	ug/L			03/04/16 15:48	1
Chloroprene	ND		5.0	0.39	ug/L			03/04/16 15:48	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/04/16 15:48	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/04/16 15:48	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/04/16 15:48	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/04/16 15:48	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/04/16 15:48	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/04/16 15:48	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/04/16 15:48	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/04/16 15:48	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/04/16 15:48	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/04/16 15:48	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/04/16 15:48	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/04/16 15:48	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/04/16 15:48	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/04/16 15:48	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/04/16 15:48	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/04/16 15:48	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/04/16 15:48	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/04/16 15:48	1
2-Hexanone	ND		20	0.59	ug/L			03/04/16 15:48	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/04/16 15:48	1

Client Sample ID: TRIPBLANK

Lab Sample ID: 160-16308-4

Date Collected: 03/01/16 08:00
Matrix: Water
Date Received: 03/01/16 16:36

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methacrylonitrile	ND		50	2.1	ug/L			03/04/16 15:48	1
Methyl bromide	ND		10	0.40	ug/L			03/04/16 15:48	1
Methyl chloride	ND		10	0.55	ug/L			03/04/16 15:48	1
Methylene bromide	ND		5.0	0.41	ug/L			03/04/16 15:48	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/04/16 15:48	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/04/16 15:48	1
Methyl iodide	ND		5.0	1.5	ug/L			03/04/16 15:48	1
Methyl methacrylate	ND		10	0.51	ug/L			03/04/16 15:48	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/04/16 15:48	1
Propionitrile	ND		50	2.4	ug/L			03/04/16 15:48	1
Styrene	ND		5.0	0.35	ug/L			03/04/16 15:48	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/04/16 15:48	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/04/16 15:48	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/04/16 15:48	1
Toluene	ND		5.0	1.0	ug/L			03/04/16 15:48	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/04/16 15:48	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/04/16 15:48	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/04/16 15:48	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/04/16 15:48	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/04/16 15:48	1
Trichloroethene	ND		5.0	0.29	ug/L			03/04/16 15:48	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/04/16 15:48	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/04/16 15:48	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/04/16 15:48	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/04/16 15:48	1
Xylenes, Total	ND		10	0.85	ug/L			03/04/16 15:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*71 - 139*		*03/04/16 15:48*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 121*		*03/04/16 15:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*76 - 121*		*03/04/16 15:48*	*1*
Toluene-d8 (Surr)	*104*		*80 - 129*		*03/04/16 15:48*	*1*

Client Sample ID: TRIPBLANK

Lab Sample ID: 160-16308-5

Date Collected: 03/01/16 08:00
Matrix: Water
Date Received: 03/01/16 16:36

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/04/16 16:14	1
Acetonitrile	ND		50	7.3	ug/L			03/04/16 16:14	1
Acrolein	ND		50	3.1	ug/L			03/04/16 16:14	1
Acrylonitrile	ND		50	1.7	ug/L			03/04/16 16:14	1
Allyl chloride	ND		10	0.39	ug/L			03/04/16 16:14	1
Benzene	ND		5.0	0.25	ug/L			03/04/16 16:14	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/04/16 16:14	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/04/16 16:14	1
Bromoform	ND		5.0	0.37	ug/L			03/04/16 16:14	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/04/16 16:14	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/04/16 16:14	1

Client Sample ID: TRIPBLANK

Lab Sample ID: 160-16308-5

Date Collected: 03/01/16 08:00

Matrix: Water

Date Received: 03/01/16 16:36

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		5.0	0.38	ug/L			03/04/16 16:14	1
Chloroethane	ND		10	0.38	ug/L			03/04/16 16:14	1
Chloroform	ND		5.0	0.15	ug/L			03/04/16 16:14	1
Chloroprene	ND		5.0	0.39	ug/L			03/04/16 16:14	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/04/16 16:14	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/04/16 16:14	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/04/16 16:14	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/04/16 16:14	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/04/16 16:14	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/04/16 16:14	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/04/16 16:14	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/04/16 16:14	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/04/16 16:14	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/04/16 16:14	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/04/16 16:14	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/04/16 16:14	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/04/16 16:14	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/04/16 16:14	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/04/16 16:14	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/04/16 16:14	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/04/16 16:14	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/04/16 16:14	1
2-Hexanone	ND		20	0.59	ug/L			03/04/16 16:14	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/04/16 16:14	1
Methacrylonitrile	ND		50	2.1	ug/L			03/04/16 16:14	1
Methyl bromide	ND		10	0.40	ug/L			03/04/16 16:14	1
Methyl chloride	ND		10	0.55	ug/L			03/04/16 16:14	1
Methylene bromide	ND		5.0	0.41	ug/L			03/04/16 16:14	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/04/16 16:14	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/04/16 16:14	1
Methyl iodide	ND		5.0	1.5	ug/L			03/04/16 16:14	1
Methyl methacrylate	ND		10	0.51	ug/L			03/04/16 16:14	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/04/16 16:14	1
Propionitrile	ND		50	2.4	ug/L			03/04/16 16:14	1
Styrene	ND		5.0	0.35	ug/L			03/04/16 16:14	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/04/16 16:14	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/04/16 16:14	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/04/16 16:14	1
Toluene	ND		5.0	1.0	ug/L			03/04/16 16:14	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/04/16 16:14	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/04/16 16:14	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/04/16 16:14	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/04/16 16:14	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/04/16 16:14	1
Trichloroethene	ND		5.0	0.29	ug/L			03/04/16 16:14	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/04/16 16:14	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/04/16 16:14	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/04/16 16:14	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/04/16 16:14	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Client Sample ID: TRIPBLANK

Lab Sample ID: 160-16308-5

Date Collected: 03/01/16 08:00

Matrix: Water

Date Received: 03/01/16 16:36

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		10	0.85	ug/L			03/04/16 16:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*71 - 139*		*03/04/16 16:14*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 121*		*03/04/16 16:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*76 - 121*		*03/04/16 16:14*	*1*
Toluene-d8 (Surr)	*101*		*80 - 129*		*03/04/16 16:14*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 160-239097/9
Matrix: Water
Analysis Batch: 239097

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/04/16 12:24	1
Acetonitrile	ND		50	7.3	ug/L			03/04/16 12:24	1
Acrolein	ND		50	3.1	ug/L			03/04/16 12:24	1
Acrylonitrile	ND		50	1.7	ug/L			03/04/16 12:24	1
Allyl chloride	ND		10	0.39	ug/L			03/04/16 12:24	1
Benzene	ND		5.0	0.25	ug/L			03/04/16 12:24	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/04/16 12:24	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/04/16 12:24	1
Bromoform	ND		5.0	0.37	ug/L			03/04/16 12:24	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/04/16 12:24	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/04/16 12:24	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/04/16 12:24	1
Chloroethane	ND		10	0.38	ug/L			03/04/16 12:24	1
Chloroform	ND		5.0	0.15	ug/L			03/04/16 12:24	1
Chloroprene	ND		5.0	0.39	ug/L			03/04/16 12:24	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/04/16 12:24	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/04/16 12:24	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/04/16 12:24	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/04/16 12:24	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/04/16 12:24	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/04/16 12:24	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/04/16 12:24	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/04/16 12:24	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/04/16 12:24	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/04/16 12:24	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/04/16 12:24	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/04/16 12:24	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/04/16 12:24	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/04/16 12:24	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/04/16 12:24	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/04/16 12:24	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/04/16 12:24	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/04/16 12:24	1
2-Hexanone	ND		20	0.59	ug/L			03/04/16 12:24	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/04/16 12:24	1
Methacrylonitrile	ND		50	2.1	ug/L			03/04/16 12:24	1
Methyl bromide	ND		10	0.40	ug/L			03/04/16 12:24	1
Methyl chloride	ND		10	0.55	ug/L			03/04/16 12:24	1
Methylene bromide	ND		5.0	0.41	ug/L			03/04/16 12:24	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/04/16 12:24	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/04/16 12:24	1
Methyl iodide	ND		5.0	1.5	ug/L			03/04/16 12:24	1
Methyl methacrylate	ND		10	0.51	ug/L			03/04/16 12:24	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/04/16 12:24	1
Propionitrile	ND		50	2.4	ug/L			03/04/16 12:24	1
Styrene	ND		5.0	0.35	ug/L			03/04/16 12:24	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/04/16 12:24	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/04/16 12:24	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 160-239097/9
Matrix: Water
Analysis Batch: 239097

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.0	0.28	ug/L			03/04/16 12:24	1
Toluene	ND		5.0	1.0	ug/L			03/04/16 12:24	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/04/16 12:24	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/04/16 12:24	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/04/16 12:24	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/04/16 12:24	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/04/16 12:24	1
Trichloroethene	ND		5.0	0.29	ug/L			03/04/16 12:24	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/04/16 12:24	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/04/16 12:24	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/04/16 12:24	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/04/16 12:24	1
Xylenes, Total	ND		10	0.85	ug/L			03/04/16 12:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*71 - 139*		*03/04/16 12:24*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 121*		*03/04/16 12:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*76 - 121*		*03/04/16 12:24*	*1*
Toluene-d8 (Surr)	*104*		*80 - 129*		*03/04/16 12:24*	*1*

Lab Sample ID: LCS 160-239097/6
Matrix: Water
Analysis Batch: 239097

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	48.6		ug/L		97	63 - 131
Acetonitrile	500	480		ug/L		96	71 - 124
Acrolein	250	278		ug/L		111	45 - 140
Acrylonitrile	500	510		ug/L		102	81 - 117
Allyl chloride	50.0	51.0		ug/L		102	74 - 126
Benzene	50.0	49.6		ug/L		99	80 - 120
Bromochloromethane	50.0	51.0		ug/L		102	80 - 120
Bromodichloromethane	50.0	50.2		ug/L		100	80 - 120
Bromoform	50.0	53.6		ug/L		107	80 - 120
Carbon disulfide	50.0	50.4		ug/L		101	79 - 126
Carbon tetrachloride	50.0	50.1		ug/L		100	73 - 123
Chlorobenzene	50.0	49.4		ug/L		99	80 - 120
Chloroethane	50.0	46.6		ug/L		93	52 - 140
Chloroform	50.0	51.1		ug/L		102	80 - 120
Chloroprene	50.0	51.2		ug/L		102	80 - 120
cis-1,2-Dichloroethene	50.0	50.7		ug/L		101	80 - 120
cis-1,3-Dichloropropene	50.0	49.9		ug/L		100	80 - 122
Dibromochloromethane	50.0	51.8		ug/L		104	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	52.2		ug/L		104	77 - 125
1,2-Dibromoethane (EDB)	50.0	50.2		ug/L		100	80 - 120
1,2-Dichlorobenzene	50.0	48.9		ug/L		98	80 - 120
1,3-Dichlorobenzene	50.0	48.0		ug/L		96	80 - 120
1,4-Dichlorobenzene	50.0	48.5		ug/L		97	80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 160-239097/6
Matrix: Water
Analysis Batch: 239097

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	50.0	48.3		ug/L		97	62 - 140
1,1-Dichloroethane	50.0	50.5		ug/L		101	80 - 120
1,2-Dichloroethane	50.0	49.9		ug/L		100	69 - 124
1,1-Dichloroethene	50.0	50.5		ug/L		101	77 - 126
1,2-Dichloropropane	50.0	50.3		ug/L		101	80 - 120
1,3-Dichloropropane	50.0	49.9		ug/L		100	80 - 120
2,2-Dichloropropane	50.0	52.1		ug/L		104	69 - 130
1,1-Dichloropropene	50.0	49.0		ug/L		98	80 - 120
Ethylbenzene	50.0	49.3		ug/L		99	80 - 120
Ethyl methacrylate	50.0	58.0		ug/L		116	80 - 124
2-Hexanone	50.0	54.8		ug/L		110	64 - 136
Isobutyl alcohol	1250	1190		ug/L		95	54 - 140
Methacrylonitrile	500	487		ug/L		97	69 - 131
Methyl bromide	50.0	48.2		ug/L		96	57 - 139
Methyl chloride	50.0	50.2		ug/L		100	70 - 127
Methylene bromide	50.0	51.0		ug/L		102	78 - 120
Methylene Chloride	50.0	51.4		ug/L		103	80 - 120
Methyl Ethyl Ketone	50.0	54.1		ug/L		108	70 - 130
Methyl iodide	50.0	50.6		ug/L		101	73 - 125
Methyl methacrylate	100	103		ug/L		103	80 - 126
4-Methyl-2-pentanone (MIBK)	50.0	54.8		ug/L		110	76 - 129
Propionitrile	500	495		ug/L		99	78 - 120
Styrene	50.0	53.3		ug/L		107	80 - 120
1,1,1,2-Tetrachloroethane	50.0	52.0		ug/L		104	80 - 120
1,1,2,2-Tetrachloroethane	50.0	49.3		ug/L		99	80 - 120
Tetrachloroethene	50.0	48.2		ug/L		96	80 - 120
Toluene	50.0	49.0		ug/L		98	80 - 120
trans-1,4-Dichloro-2-butene	50.0	52.1		ug/L		104	75 - 127
trans-1,2-Dichloroethene	50.0	50.3		ug/L		101	80 - 120
trans-1,3-Dichloropropene	50.0	50.6		ug/L		101	80 - 130
1,1,1-Trichloroethane	50.0	50.3		ug/L		101	76 - 120
1,1,2-Trichloroethane	50.0	49.7		ug/L		99	80 - 120
Trichloroethene	50.0	48.2		ug/L		96	73 - 120
Trichlorofluoromethane	50.0	48.8		ug/L		98	74 - 130
1,2,3-Trichloropropane	50.0	54.0		ug/L		108	80 - 120
Vinyl acetate	50.0	47.9		ug/L		96	37 - 140
Vinyl chloride	50.0	47.5		ug/L		95	51 - 140
Xylenes, Total	100	99.5		ug/L		100	80 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*71 - 139*
Dibromofluoromethane (Surr)	*104*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*101*		*76 - 121*
Toluene-d8 (Surr)	*102*		*80 - 129*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 160-239097/7
Matrix: Water
Analysis Batch: 239097

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	48.8		ug/L		98	63 - 131	0	20
Acetonitrile	500	468		ug/L		94	71 - 124	2	20
Acrolein	250	267		ug/L		107	45 - 140	4	20
Acrylonitrile	500	508		ug/L		102	81 - 117	0	20
Allyl chloride	50.0	50.8		ug/L		102	74 - 126	0	20
Benzene	50.0	49.3		ug/L		99	80 - 120	1	20
Bromochloromethane	50.0	51.9		ug/L		104	80 - 120	2	20
Bromodichloromethane	50.0	51.1		ug/L		102	80 - 120	2	20
Bromoform	50.0	53.0		ug/L		106	80 - 120	1	20
Carbon disulfide	50.0	50.3		ug/L		101	79 - 126	0	20
Carbon tetrachloride	50.0	49.4		ug/L		99	73 - 123	1	20
Chlorobenzene	50.0	49.5		ug/L		99	80 - 120	0	20
Chloroethane	50.0	45.5		ug/L		91	52 - 140	2	20
Chloroform	50.0	51.7		ug/L		103	80 - 120	1	20
Chloroprene	50.0	51.2		ug/L		102	80 - 120	0	20
cis-1,2-Dichloroethene	50.0	51.3		ug/L		103	80 - 120	1	20
cis-1,3-Dichloropropene	50.0	49.6		ug/L		99	80 - 122	0	20
Dibromochloromethane	50.0	52.1		ug/L		104	80 - 120	1	20
1,2-Dibromo-3-Chloropropane	50.0	52.9		ug/L		106	77 - 125	1	20
1,2-Dibromoethane (EDB)	50.0	51.6		ug/L		103	80 - 120	3	20
1,2-Dichlorobenzene	50.0	49.2		ug/L		98	80 - 120	1	20
1,3-Dichlorobenzene	50.0	47.8		ug/L		96	80 - 120	0	20
1,4-Dichlorobenzene	50.0	48.9		ug/L		98	80 - 120	1	20
Dichlorodifluoromethane	50.0	46.3		ug/L		93	62 - 140	4	20
1,1-Dichloroethane	50.0	50.1		ug/L		100	80 - 120	1	20
1,2-Dichloroethane	50.0	49.8		ug/L		100	69 - 124	0	20
1,1-Dichloroethene	50.0	49.8		ug/L		100	77 - 126	2	20
1,2-Dichloropropane	50.0	50.4		ug/L		101	80 - 120	0	20
1,3-Dichloropropane	50.0	50.5		ug/L		101	80 - 120	1	20
2,2-Dichloropropane	50.0	49.7		ug/L		99	69 - 130	5	20
1,1-Dichloropropene	50.0	49.1		ug/L		98	80 - 120	0	20
Ethylbenzene	50.0	49.3		ug/L		99	80 - 120	0	20
Ethyl methacrylate	50.0	55.7		ug/L		111	80 - 124	4	20
2-Hexanone	50.0	54.0		ug/L		108	64 - 136	1	20
Isobutyl alcohol	1250	1220		ug/L		97	54 - 140	3	20
Methacrylonitrile	500	494		ug/L		99	69 - 131	1	20
Methyl bromide	50.0	45.9		ug/L		92	57 - 139	5	20
Methyl chloride	50.0	49.8		ug/L		100	70 - 127	1	20
Methylene bromide	50.0	50.9		ug/L		102	78 - 120	0	20
Methylene Chloride	50.0	50.5		ug/L		101	80 - 120	2	20
Methyl Ethyl Ketone	50.0	53.9		ug/L		108	70 - 130	0	20
Methyl iodide	50.0	50.4		ug/L		101	73 - 125	0	20
Methyl methacrylate	100	103		ug/L		103	80 - 126	0	20
4-Methyl-2-pentanone (MIBK)	50.0	54.8		ug/L		110	76 - 129	0	20
Propionitrile	500	504		ug/L		101	78 - 120	2	20
Styrene	50.0	53.7		ug/L		107	80 - 120	1	20
1,1,1,2-Tetrachloroethane	50.0	51.2		ug/L		102	80 - 120	2	20
1,1,2,2-Tetrachloroethane	50.0	49.6		ug/L		99	80 - 120	1	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 160-239097/7
Matrix: Water
Analysis Batch: 239097

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene			50.0	48.8		ug/L		98	80 - 120	1	20
Toluene			50.0	49.9		ug/L		100	80 - 120	2	20
trans-1,4-Dichloro-2-butene			50.0	50.2		ug/L		100	75 - 127	4	20
trans-1,2-Dichloroethene			50.0	49.7		ug/L		99	80 - 120	1	20
trans-1,3-Dichloropropene			50.0	51.5		ug/L		103	80 - 130	2	20
1,1,1-Trichloroethane			50.0	49.7		ug/L		99	76 - 120	1	20
1,1,2-Trichloroethane			50.0	50.9		ug/L		102	80 - 120	2	20
Trichloroethene			50.0	48.2		ug/L		96	73 - 120	0	20
Trichlorofluoromethane			50.0	46.9		ug/L		94	74 - 130	4	20
1,2,3-Trichloropropane			50.0	51.3		ug/L		103	80 - 120	5	20
Vinyl acetate			50.0	49.3		ug/L		99	37 - 140	3	20
Vinyl chloride			50.0	45.5		ug/L		91	51 - 140	4	20
Xylenes, Total			100	98.7		ug/L		99	80 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*71 - 139*
Dibromofluoromethane (Surr)	*103*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*101*		*76 - 121*
Toluene-d8 (Surr)	*103*		*80 - 129*

Lab Sample ID: 160-16308-1 MS
Matrix: Water
Analysis Batch: 239097

Client Sample ID: PZ-105-SS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acetone	ND		50.0	45.5		ug/L		91	52 - 138		
Acetonitrile	ND		500	476		ug/L		95	57 - 140		
Acrolein	ND		250	278		ug/L		111	40 - 150		
Acrylonitrile	ND		500	502		ug/L		100	58 - 142		
Allyl chloride	ND		50.0	50.4		ug/L		101	74 - 124		
Benzene	2.2	J	50.0	52.5		ug/L		101	80 - 120		
Bromochloromethane	ND		50.0	50.7		ug/L		101	72 - 125		
Bromodichloromethane	ND		50.0	51.8		ug/L		104	71 - 128		
Bromoform	ND		50.0	51.6		ug/L		103	65 - 133		
Carbon disulfide	ND		50.0	50.9		ug/L		102	69 - 139		
Carbon tetrachloride	ND		50.0	49.7		ug/L		99	70 - 126		
Chlorobenzene	ND		50.0	50.2		ug/L		100	80 - 120		
Chloroethane	ND		50.0	46.7		ug/L		93	59 - 144		
Chloroform	ND		50.0	51.3		ug/L		103	80 - 120		
Chloroprene	ND		50.0	51.7		ug/L		103	77 - 121		
cis-1,2-Dichloroethene	ND		50.0	50.7		ug/L		101	80 - 124		
cis-1,3-Dichloropropene	ND		50.0	51.0		ug/L		102	67 - 130		
Dibromochloromethane	ND		50.0	51.9		ug/L		104	68 - 133		
1,2-Dibromo-3-Chloropropane	ND		50.0	52.1		ug/L		104	58 - 148		
1,2-Dibromoethane (EDB)	ND		50.0	49.2		ug/L		98	65 - 138		
1,2-Dichlorobenzene	ND		50.0	49.1		ug/L		98	80 - 124		
1,3-Dichlorobenzene	ND		50.0	48.8		ug/L		98	80 - 120		
1,4-Dichlorobenzene	ND		50.0	49.4		ug/L		99	80 - 120		

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16308-1 MS
Matrix: Water
Analysis Batch: 239097

Client Sample ID: PZ-105-SS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	ND		50.0	47.4		ug/L		95	65 - 140
1,1-Dichloroethane	ND		50.0	50.8		ug/L		102	80 - 120
1,2-Dichloroethane	ND		50.0	49.8		ug/L		100	56 - 136
1,1-Dichloroethene	ND		50.0	49.9		ug/L		100	66 - 137
1,2-Dichloropropane	ND		50.0	50.9		ug/L		102	80 - 123
1,3-Dichloropropane	ND		50.0	48.9		ug/L		98	70 - 136
2,2-Dichloropropane	ND		50.0	50.4		ug/L		101	54 - 148
1,1-Dichloropropene	ND		50.0	50.5		ug/L		101	80 - 121
Ethylbenzene	ND		50.0	50.5		ug/L		101	80 - 121
Ethyl methacrylate	ND		50.0	55.0		ug/L		110	62 - 142
2-Hexanone	ND		50.0	48.8		ug/L		98	47 - 150
Isobutyl alcohol	ND		1250	1230		ug/L		99	48 - 150
Methacrylonitrile	ND		500	491		ug/L		98	54 - 149
Methyl bromide	ND		50.0	46.5		ug/L		93	53 - 146
Methyl chloride	ND		50.0	47.5		ug/L		95	61 - 137
Methylene bromide	ND		50.0	50.4		ug/L		101	61 - 136
Methylene Chloride	ND		50.0	50.8		ug/L		102	80 - 120
Methyl Ethyl Ketone	ND		50.0	55.7		ug/L		111	58 - 143
Methyl iodide	ND		50.0	50.2		ug/L		100	69 - 124
Methyl methacrylate	ND		100	103		ug/L		103	56 - 150
4-Methyl-2-pentanone (MIBK)	ND		50.0	50.4		ug/L		101	53 - 150
Propionitrile	ND		500	492		ug/L		98	57 - 142
Styrene	ND		50.0	53.6		ug/L		107	44 - 150
1,1,1,2-Tetrachloroethane	ND		50.0	51.5		ug/L		103	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	48.9		ug/L		98	60 - 150
Tetrachloroethene	ND		50.0	48.8		ug/L		98	66 - 132
Toluene	ND		50.0	49.9		ug/L		100	75 - 134
trans-1,4-Dichloro-2-butene	ND		50.0	53.7		ug/L		107	55 - 146
trans-1,2-Dichloroethene	ND		50.0	50.2		ug/L		100	79 - 121
trans-1,3-Dichloropropene	ND		50.0	51.2		ug/L		102	68 - 143
1,1,1-Trichloroethane	ND		50.0	50.4		ug/L		101	74 - 123
1,1,2-Trichloroethane	ND		50.0	50.0		ug/L		100	70 - 134
Trichloroethene	ND		50.0	48.8		ug/L		98	63 - 120
Trichlorofluoromethane	ND		50.0	49.3		ug/L		99	53 - 150
1,2,3-Trichloropropane	ND		50.0	49.9		ug/L		100	62 - 137
Vinyl acetate	ND		50.0	50.8		ug/L		102	63 - 150
Vinyl chloride	ND		50.0	47.0		ug/L		94	54 - 140
Xylenes, Total	ND		100	101		ug/L		101	80 - 124

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*71 - 139*
Dibromofluoromethane (Surr)	*103*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*98*		*76 - 121*
Toluene-d8 (Surr)	*102*		*80 - 129*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16308-1 MSD
Matrix: Water
Analysis Batch: 239097

Client Sample ID: PZ-105-SS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		50.0	46.1		ug/L		92	52 - 138	1	20
Acetonitrile	ND		500	465		ug/L		93	57 - 140	2	20
Acrolein	ND		250	271		ug/L		108	40 - 150	3	20
Acrylonitrile	ND		500	492		ug/L		98	58 - 142	2	20
Allyl chloride	ND		50.0	49.5		ug/L		99	74 - 124	2	20
Benzene	2.2	J	50.0	51.3		ug/L		98	80 - 120	2	20
Bromochloromethane	ND		50.0	49.4		ug/L		99	72 - 125	3	20
Bromodichloromethane	ND		50.0	50.1		ug/L		100	71 - 128	3	20
Bromoform	ND		50.0	51.5		ug/L		103	65 - 133	0	20
Carbon disulfide	ND		50.0	49.1		ug/L		98	69 - 139	4	20
Carbon tetrachloride	ND		50.0	48.7		ug/L		97	70 - 126	2	20
Chlorobenzene	ND		50.0	48.6		ug/L		97	80 - 120	3	20
Chloroethane	ND		50.0	46.6		ug/L		93	59 - 144	0	20
Chloroform	ND		50.0	49.9		ug/L		100	80 - 120	3	20
Chloroprene	ND		50.0	50.1		ug/L		100	77 - 121	3	20
cis-1,2-Dichloroethene	ND		50.0	49.7		ug/L		99	80 - 124	2	20
cis-1,3-Dichloropropene	ND		50.0	48.9		ug/L		98	67 - 130	4	20
Dibromochloromethane	ND		50.0	50.1		ug/L		100	68 - 133	4	20
1,2-Dibromo-3-Chloropropane	ND		50.0	50.4		ug/L		101	58 - 148	3	20
1,2-Dibromoethane (EDB)	ND		50.0	48.7		ug/L		97	65 - 138	1	20
1,2-Dichlorobenzene	ND		50.0	47.2		ug/L		94	80 - 124	4	20
1,3-Dichlorobenzene	ND		50.0	47.2		ug/L		94	80 - 120	3	20
1,4-Dichlorobenzene	ND		50.0	48.1		ug/L		96	80 - 120	3	20
Dichlorodifluoromethane	ND		50.0	45.9		ug/L		92	65 - 140	3	20
1,1-Dichloroethane	ND		50.0	49.6		ug/L		99	80 - 120	2	20
1,2-Dichloroethane	ND		50.0	49.2		ug/L		98	56 - 136	1	20
1,1-Dichloroethene	ND		50.0	48.4		ug/L		97	66 - 137	3	20
1,2-Dichloropropane	ND		50.0	49.4		ug/L		99	80 - 123	3	20
1,3-Dichloropropane	ND		50.0	49.1		ug/L		98	70 - 136	0	20
2,2-Dichloropropane	ND		50.0	50.2		ug/L		100	54 - 148	0	20
1,1-Dichloropropene	ND		50.0	48.3		ug/L		97	80 - 121	4	20
Ethylbenzene	ND		50.0	49.3		ug/L		99	80 - 121	2	20
Ethyl methacrylate	ND		50.0	54.1		ug/L		108	62 - 142	2	20
2-Hexanone	ND		50.0	50.3		ug/L		101	47 - 150	3	20
Isobutyl alcohol	ND		1250	1250		ug/L		100	48 - 150	2	20
Methacrylonitrile	ND		500	483		ug/L		97	54 - 149	2	20
Methyl bromide	ND		50.0	46.2		ug/L		92	53 - 146	1	20
Methyl chloride	ND		50.0	45.9		ug/L		92	61 - 137	3	20
Methylene bromide	ND		50.0	49.5		ug/L		99	61 - 136	2	20
Methylene Chloride	ND		50.0	49.4		ug/L		99	80 - 120	3	20
Methyl Ethyl Ketone	ND		50.0	52.5		ug/L		105	58 - 143	6	20
Methyl iodide	ND		50.0	49.2		ug/L		98	69 - 124	2	20
Methyl methacrylate	ND		100	99.4		ug/L		99	56 - 150	4	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	51.1		ug/L		102	53 - 150	1	20
Propionitrile	ND		500	486		ug/L		97	57 - 142	1	20
Styrene	ND		50.0	53.7		ug/L		107	44 - 150	0	20
1,1,1,2-Tetrachloroethane	ND		50.0	50.8		ug/L		102	80 - 120	1	20
1,1,2,2-Tetrachloroethane	ND		50.0	47.7		ug/L		95	60 - 150	2	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16308-1 MSD
Matrix: Water
Analysis Batch: 239097

Client Sample ID: PZ-105-SS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	ND		50.0	47.4		ug/L		95	66 - 132	3	20
Toluene	ND		50.0	49.0		ug/L		98	75 - 134	2	20
trans-1,4-Dichloro-2-butene	ND		50.0	50.2		ug/L		100	55 - 146	7	20
trans-1,2-Dichloroethene	ND		50.0	49.7		ug/L		99	79 - 121	1	20
trans-1,3-Dichloropropene	ND		50.0	50.5		ug/L		101	68 - 143	1	20
1,1,1-Trichloroethane	ND		50.0	49.9		ug/L		100	74 - 123	1	20
1,1,2-Trichloroethane	ND		50.0	49.3		ug/L		99	70 - 134	1	20
Trichloroethene	ND		50.0	47.7		ug/L		95	63 - 120	2	20
Trichlorofluoromethane	ND		50.0	47.4		ug/L		95	53 - 150	4	20
1,2,3-Trichloropropane	ND		50.0	49.7		ug/L		99	62 - 137	0	20
Vinyl acetate	ND		50.0	50.1		ug/L		100	63 - 150	1	20
Vinyl chloride	ND		50.0	46.0		ug/L		92	54 - 140	2	20
Xylenes, Total	ND		100	97.7		ug/L		98	80 - 124	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*71 - 139*
Dibromofluoromethane (Surr)	*102*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*99*		*76 - 121*
Toluene-d8 (Surr)	*103*		*80 - 129*

Lab Sample ID: MB 160-239802/7
Matrix: Water
Analysis Batch: 239802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/09/16 19:19	1
Acetonitrile	ND		50	7.3	ug/L			03/09/16 19:19	1
Acrolein	ND		50	3.1	ug/L			03/09/16 19:19	1
Acrylonitrile	ND		50	1.7	ug/L			03/09/16 19:19	1
Allyl chloride	ND		10	0.39	ug/L			03/09/16 19:19	1
Benzene	ND		5.0	0.25	ug/L			03/09/16 19:19	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/09/16 19:19	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/09/16 19:19	1
Bromoform	ND		5.0	0.37	ug/L			03/09/16 19:19	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/09/16 19:19	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/09/16 19:19	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/09/16 19:19	1
Chloroethane	ND		10	0.38	ug/L			03/09/16 19:19	1
Chloroform	ND		5.0	0.15	ug/L			03/09/16 19:19	1
Chloroprene	ND		5.0	0.39	ug/L			03/09/16 19:19	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/09/16 19:19	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/09/16 19:19	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/09/16 19:19	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/09/16 19:19	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/09/16 19:19	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/09/16 19:19	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/09/16 19:19	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/09/16 19:19	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 160-239802/7
Matrix: Water
Analysis Batch: 239802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/09/16 19:19	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/09/16 19:19	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/09/16 19:19	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/09/16 19:19	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/09/16 19:19	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/09/16 19:19	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/09/16 19:19	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/09/16 19:19	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/09/16 19:19	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/09/16 19:19	1
2-Hexanone	ND		20	0.59	ug/L			03/09/16 19:19	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/09/16 19:19	1
Methacrylonitrile	ND		50	2.1	ug/L			03/09/16 19:19	1
Methyl bromide	ND		10	0.40	ug/L			03/09/16 19:19	1
Methyl chloride	ND		10	0.55	ug/L			03/09/16 19:19	1
Methylene bromide	ND		5.0	0.41	ug/L			03/09/16 19:19	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/09/16 19:19	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/09/16 19:19	1
Methyl iodide	ND		5.0	1.5	ug/L			03/09/16 19:19	1
Methyl methacrylate	ND		10	0.51	ug/L			03/09/16 19:19	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/09/16 19:19	1
Propionitrile	ND		50	2.4	ug/L			03/09/16 19:19	1
Styrene	ND		5.0	0.35	ug/L			03/09/16 19:19	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/09/16 19:19	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/09/16 19:19	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/09/16 19:19	1
Toluene	ND		5.0	1.0	ug/L			03/09/16 19:19	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/09/16 19:19	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/09/16 19:19	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/09/16 19:19	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/09/16 19:19	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/09/16 19:19	1
Trichloroethene	ND		5.0	0.29	ug/L			03/09/16 19:19	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/09/16 19:19	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/09/16 19:19	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/09/16 19:19	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/09/16 19:19	1
Xylenes, Total	ND		10	0.85	ug/L			03/09/16 19:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*71 - 139*		*03/09/16 19:19*	*1*
Dibromofluoromethane (Surr)	*92*		*80 - 121*		*03/09/16 19:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*76 - 121*		*03/09/16 19:19*	*1*
Toluene-d8 (Surr)	*97*		*80 - 129*		*03/09/16 19:19*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 160-239802/4
Matrix: Water
Analysis Batch: 239802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	47.9		ug/L		96	63 - 131
Acetonitrile	500	430		ug/L		86	71 - 124
Acrolein	250	228		ug/L		91	45 - 140
Acrylonitrile	500	494		ug/L		99	81 - 117
Allyl chloride	50.0	48.3		ug/L		97	74 - 126
Benzene	50.0	49.3		ug/L		99	80 - 120
Bromochloromethane	50.0	48.7		ug/L		97	80 - 120
Bromodichloromethane	50.0	51.1		ug/L		102	80 - 120
Bromoform	50.0	50.7		ug/L		101	80 - 120
Carbon disulfide	50.0	50.5		ug/L		101	79 - 126
Carbon tetrachloride	50.0	48.0		ug/L		96	73 - 123
Chlorobenzene	50.0	49.1		ug/L		98	80 - 120
Chloroethane	50.0	45.9		ug/L		92	52 - 140
Chloroform	50.0	50.4		ug/L		101	80 - 120
Chloroprene	50.0	47.5		ug/L		95	80 - 120
cis-1,2-Dichloroethene	50.0	50.3		ug/L		101	80 - 120
cis-1,3-Dichloropropene	50.0	51.4		ug/L		103	80 - 122
Dibromochloromethane	50.0	51.0		ug/L		102	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	51.7		ug/L		103	77 - 125
1,2-Dibromoethane (EDB)	50.0	49.6		ug/L		99	80 - 120
1,2-Dichlorobenzene	50.0	47.9		ug/L		96	80 - 120
1,3-Dichlorobenzene	50.0	47.5		ug/L		95	80 - 120
1,4-Dichlorobenzene	50.0	47.7		ug/L		95	80 - 120
Dichlorodifluoromethane	50.0	43.5		ug/L		87	62 - 140
1,1-Dichloroethane	50.0	49.1		ug/L		98	80 - 120
1,2-Dichloroethane	50.0	48.8		ug/L		98	69 - 124
1,1-Dichloroethene	50.0	49.0		ug/L		98	77 - 126
1,2-Dichloropropane	50.0	50.0		ug/L		100	80 - 120
1,3-Dichloropropane	50.0	49.4		ug/L		99	80 - 120
2,2-Dichloropropane	50.0	45.9		ug/L		92	69 - 130
1,1-Dichloropropene	50.0	48.4		ug/L		97	80 - 120
Ethylbenzene	50.0	48.9		ug/L		98	80 - 120
Ethyl methacrylate	50.0	55.0		ug/L		110	80 - 124
2-Hexanone	50.0	51.7		ug/L		103	64 - 136
Isobutyl alcohol	1250	1060		ug/L		85	54 - 140
Methacrylonitrile	500	484		ug/L		97	69 - 131
Methyl bromide	50.0	49.8		ug/L		100	57 - 139
Methyl chloride	50.0	46.7		ug/L		93	70 - 127
Methylene bromide	50.0	48.7		ug/L		97	78 - 120
Methylene Chloride	50.0	50.4		ug/L		101	80 - 120
Methyl Ethyl Ketone	50.0	55.0		ug/L		110	70 - 130
Methyl iodide	50.0	49.4		ug/L		99	73 - 125
Methyl methacrylate	100	101		ug/L		101	80 - 126
4-Methyl-2-pentanone (MIBK)	50.0	51.6		ug/L		103	76 - 129
Propionitrile	500	495		ug/L		99	78 - 120
Styrene	50.0	53.5		ug/L		107	80 - 120
1,1,1,2-Tetrachloroethane	50.0	49.7		ug/L		99	80 - 120
1,1,2,2-Tetrachloroethane	50.0	47.8		ug/L		96	80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 160-239802/4
Matrix: Water
Analysis Batch: 239802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	50.0	46.6		ug/L		93	80 - 120
Toluene	50.0	48.9		ug/L		98	80 - 120
trans-1,4-Dichloro-2-butene	50.0	51.0		ug/L		102	75 - 127
trans-1,2-Dichloroethene	50.0	48.5		ug/L		97	80 - 120
trans-1,3-Dichloropropene	50.0	51.0		ug/L		102	80 - 130
1,1,1-Trichloroethane	50.0	48.1		ug/L		96	76 - 120
1,1,2-Trichloroethane	50.0	49.8		ug/L		100	80 - 120
Trichloroethene	50.0	47.6		ug/L		95	73 - 120
Trichlorofluoromethane	50.0	46.3		ug/L		93	74 - 130
1,2,3-Trichloropropane	50.0	49.1		ug/L		98	80 - 120
Vinyl acetate	50.0	48.8		ug/L		98	37 - 140
Vinyl chloride	50.0	44.5		ug/L		89	51 - 140
Xylenes, Total	100	97.4		ug/L		97	80 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*71 - 139*
Dibromofluoromethane (Surr)	*98*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*93*		*76 - 121*
Toluene-d8 (Surr)	*96*		*80 - 129*

Lab Sample ID: LCSD 160-239802/5
Matrix: Water
Analysis Batch: 239802

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	46.4		ug/L		93	63 - 131	3	20
Acetonitrile	500	420		ug/L		84	71 - 124	2	20
Acrolein	250	228		ug/L		91	45 - 140	0	20
Acrylonitrile	500	502		ug/L		100	81 - 117	2	20
Allyl chloride	50.0	49.6		ug/L		99	74 - 126	3	20
Benzene	50.0	49.7		ug/L		99	80 - 120	1	20
Bromochloromethane	50.0	50.8		ug/L		102	80 - 120	4	20
Bromodichloromethane	50.0	51.2		ug/L		102	80 - 120	0	20
Bromoform	50.0	52.2		ug/L		104	80 - 120	3	20
Carbon disulfide	50.0	51.2		ug/L		102	79 - 126	1	20
Carbon tetrachloride	50.0	49.8		ug/L		100	73 - 123	4	20
Chlorobenzene	50.0	49.4		ug/L		99	80 - 120	1	20
Chloroethane	50.0	46.6		ug/L		93	52 - 140	2	20
Chloroform	50.0	50.8		ug/L		102	80 - 120	1	20
Chloroprene	50.0	49.5		ug/L		99	80 - 120	4	20
cis-1,2-Dichloroethene	50.0	50.8		ug/L		102	80 - 120	1	20
cis-1,3-Dichloropropene	50.0	50.8		ug/L		102	80 - 122	1	20
Dibromochloromethane	50.0	50.8		ug/L		102	80 - 120	0	20
1,2-Dibromo-3-Chloropropane	50.0	52.4		ug/L		105	77 - 125	1	20
1,2-Dibromoethane (EDB)	50.0	50.0		ug/L		100	80 - 120	1	20
1,2-Dichlorobenzene	50.0	48.6		ug/L		97	80 - 120	1	20
1,3-Dichlorobenzene	50.0	47.9		ug/L		96	80 - 120	1	20
1,4-Dichlorobenzene	50.0	49.4		ug/L		99	80 - 120	3	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 160-239802/5
Matrix: Water
Analysis Batch: 239802

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dichlorodifluoromethane			50.0	45.8		ug/L		92	62 - 140	5	20
1,1-Dichloroethane			50.0	50.3		ug/L		101	80 - 120	2	20
1,2-Dichloroethane			50.0	49.8		ug/L		100	69 - 124	2	20
1,1-Dichloroethene			50.0	50.4		ug/L		101	77 - 126	3	20
1,2-Dichloropropane			50.0	50.4		ug/L		101	80 - 120	1	20
1,3-Dichloropropane			50.0	49.2		ug/L		98	80 - 120	1	20
2,2-Dichloropropane			50.0	49.0		ug/L		98	69 - 130	7	20
1,1-Dichloropropene			50.0	49.8		ug/L		100	80 - 120	3	20
Ethylbenzene			50.0	48.9		ug/L		98	80 - 120	0	20
Ethyl methacrylate			50.0	55.3		ug/L		111	80 - 124	1	20
2-Hexanone			50.0	50.9		ug/L		102	64 - 136	2	20
Isobutyl alcohol			1250	1120		ug/L		89	54 - 140	5	20
Methacrylonitrile			500	484		ug/L		97	69 - 131	0	20
Methyl bromide			50.0	49.9		ug/L		100	57 - 139	0	20
Methyl chloride			50.0	47.5		ug/L		95	70 - 127	2	20
Methylene bromide			50.0	50.0		ug/L		100	78 - 120	3	20
Methylene Chloride			50.0	50.4		ug/L		101	80 - 120	0	20
Methyl Ethyl Ketone			50.0	53.8		ug/L		108	70 - 130	2	20
Methyl iodide			50.0	49.7		ug/L		99	73 - 125	1	20
Methyl methacrylate			100	103		ug/L		103	80 - 126	2	20
4-Methyl-2-pentanone (MIBK)			50.0	52.6		ug/L		105	76 - 129	2	20
Propionitrile			500	499		ug/L		100	78 - 120	1	20
Styrene			50.0	53.4		ug/L		107	80 - 120	0	20
1,1,1,2-Tetrachloroethane			50.0	49.8		ug/L		100	80 - 120	0	20
1,1,2,2-Tetrachloroethane			50.0	48.9		ug/L		98	80 - 120	2	20
Tetrachloroethene			50.0	48.0		ug/L		96	80 - 120	3	20
Toluene			50.0	48.5		ug/L		97	80 - 120	1	20
trans-1,4-Dichloro-2-butene			50.0	48.0		ug/L		96	75 - 127	6	20
trans-1,2-Dichloroethene			50.0	50.1		ug/L		100	80 - 120	3	20
trans-1,3-Dichloropropene			50.0	50.5		ug/L		101	80 - 130	1	20
1,1,1-Trichloroethane			50.0	49.6		ug/L		99	76 - 120	3	20
1,1,2-Trichloroethane			50.0	49.3		ug/L		99	80 - 120	1	20
Trichloroethene			50.0	49.1		ug/L		98	73 - 120	3	20
Trichlorofluoromethane			50.0	47.9		ug/L		96	74 - 130	3	20
1,2,3-Trichloropropane			50.0	49.9		ug/L		100	80 - 120	2	20
Vinyl acetate			50.0	50.5		ug/L		101	37 - 140	3	20
Vinyl chloride			50.0	45.7		ug/L		91	51 - 140	3	20
Xylenes, Total			100	97.7		ug/L		98	80 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*71 - 139*
Dibromofluoromethane (Surr)	*97*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*93*		*76 - 121*
Toluene-d8 (Surr)	*94*		*80 - 129*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16441-A-5 MS
Matrix: Water
Analysis Batch: 239802

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		50.0	49.4		ug/L		99	52 - 138
Acetonitrile	ND		500	472		ug/L		94	57 - 140
Acrolein	ND		250	269		ug/L		108	40 - 150
Acrylonitrile	ND		500	573		ug/L		115	58 - 142
Allyl chloride	ND		50.0	53.7		ug/L		107	74 - 124
Benzene	ND		50.0	52.9		ug/L		106	80 - 120
Bromochloromethane	ND		50.0	54.6		ug/L		109	72 - 125
Bromodichloromethane	ND		50.0	54.8		ug/L		110	71 - 128
Bromoform	ND		50.0	56.4		ug/L		113	65 - 133
Carbon disulfide	ND		50.0	55.1		ug/L		110	69 - 139
Carbon tetrachloride	ND		50.0	51.5		ug/L		103	70 - 126
Chlorobenzene	ND		50.0	50.5		ug/L		101	80 - 120
Chloroethane	ND		50.0	49.0		ug/L		98	59 - 144
Chloroform	ND		50.0	52.6		ug/L		105	80 - 120
Chloroprene	ND		50.0	51.2		ug/L		102	77 - 121
cis-1,2-Dichloroethene	ND		50.0	53.5		ug/L		107	80 - 124
cis-1,3-Dichloropropene	ND		50.0	54.9		ug/L		110	67 - 130
Dibromochloromethane	ND		50.0	52.4		ug/L		105	68 - 133
1,2-Dibromo-3-Chloropropane	ND		50.0	55.3		ug/L		111	58 - 148
1,2-Dibromoethane (EDB)	ND		50.0	52.4		ug/L		105	65 - 138
1,2-Dichlorobenzene	ND		50.0	49.7		ug/L		99	80 - 124
1,3-Dichlorobenzene	ND		50.0	48.1		ug/L		96	80 - 120
1,4-Dichlorobenzene	ND		50.0	48.9		ug/L		98	80 - 120
Dichlorodifluoromethane	ND		50.0	53.6		ug/L		107	65 - 140
1,1-Dichloroethane	ND		50.0	52.6		ug/L		105	80 - 120
1,2-Dichloroethane	ND		50.0	54.2		ug/L		108	56 - 136
1,1-Dichloroethene	ND		50.0	53.9		ug/L		108	66 - 137
1,2-Dichloropropane	ND		50.0	53.3		ug/L		107	80 - 123
1,3-Dichloropropane	ND		50.0	51.4		ug/L		103	70 - 136
2,2-Dichloropropane	ND		50.0	51.8		ug/L		104	54 - 148
1,1-Dichloropropene	ND		50.0	51.7		ug/L		103	80 - 121
Ethylbenzene	ND		50.0	50.3		ug/L		101	80 - 121
Ethyl methacrylate	ND		50.0	57.0		ug/L		114	62 - 142
2-Hexanone	ND		50.0	54.0		ug/L		108	47 - 150
Isobutyl alcohol	ND		1250	1030		ug/L		82	48 - 150
Methacrylonitrile	ND		500	559		ug/L		112	54 - 149
Methyl bromide	ND		50.0	53.6		ug/L		107	53 - 146
Methyl chloride	ND		50.0	51.3		ug/L		103	61 - 137
Methylene bromide	ND		50.0	54.7		ug/L		109	61 - 136
Methylene Chloride	ND		50.0	54.5		ug/L		109	80 - 120
Methyl Ethyl Ketone	ND		50.0	61.1		ug/L		122	58 - 143
Methyl iodide	ND		50.0	53.3		ug/L		107	69 - 124
Methyl methacrylate	ND		100	117		ug/L		117	56 - 150
4-Methyl-2-pentanone (MIBK)	ND		50.0	52.4		ug/L		105	53 - 150
Propionitrile	ND		500	564		ug/L		113	57 - 142
Styrene	ND		50.0	53.7		ug/L		107	44 - 150
1,1,1,2-Tetrachloroethane	ND		50.0	51.1		ug/L		102	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	51.2		ug/L		102	60 - 150

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16441-A-5 MS
Matrix: Water
Analysis Batch: 239802

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	ND		50.0	47.4		ug/L		95	66 - 132
Toluene	ND		50.0	46.9		ug/L		94	75 - 134
trans-1,4-Dichloro-2-butene	ND		50.0	53.3		ug/L		107	55 - 146
trans-1,2-Dichloroethene	ND		50.0	53.2		ug/L		106	79 - 121
trans-1,3-Dichloropropene	ND		50.0	51.9		ug/L		104	68 - 143
1,1,1-Trichloroethane	ND		50.0	51.0		ug/L		102	74 - 123
1,1,2-Trichloroethane	ND		50.0	50.4		ug/L		101	70 - 134
Trichloroethene	ND		50.0	48.4		ug/L		97	63 - 120
Trichlorofluoromethane	ND		50.0	50.7		ug/L		101	53 - 150
1,2,3-Trichloropropane	ND		50.0	54.1		ug/L		108	62 - 137
Vinyl acetate	ND		50.0	59.5		ug/L		119	63 - 150
Vinyl chloride	ND		50.0	48.9		ug/L		98	54 - 140
Xylenes, Total	ND		100	100		ug/L		100	80 - 124

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*71 - 139*
Dibromofluoromethane (Surr)	*105*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*105*		*76 - 121*
Toluene-d8 (Surr)	*97*		*80 - 129*

Lab Sample ID: 160-16441-A-5 MSD
Matrix: Water
Analysis Batch: 239802

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		50.0	49.1		ug/L		98	52 - 138	1	20
Acetonitrile	ND		500	448		ug/L		90	57 - 140	5	20
Acrolein	ND		250	258		ug/L		103	40 - 150	4	20
Acrylonitrile	ND		500	552		ug/L		110	58 - 142	4	20
Allyl chloride	ND		50.0	50.8		ug/L		102	74 - 124	6	20
Benzene	ND		50.0	49.8		ug/L		100	80 - 120	6	20
Bromochloromethane	ND		50.0	51.2		ug/L		102	72 - 125	6	20
Bromodichloromethane	ND		50.0	50.5		ug/L		101	71 - 128	8	20
Bromoform	ND		50.0	52.6		ug/L		105	65 - 133	7	20
Carbon disulfide	ND		50.0	51.3		ug/L		103	69 - 139	7	20
Carbon tetrachloride	ND		50.0	47.9		ug/L		96	70 - 126	7	20
Chlorobenzene	ND		50.0	48.1		ug/L		96	80 - 120	5	20
Chloroethane	ND		50.0	46.6		ug/L		93	59 - 144	5	20
Chloroform	ND		50.0	51.0		ug/L		102	80 - 120	3	20
Chloroprene	ND		50.0	48.6		ug/L		97	77 - 121	5	20
cis-1,2-Dichloroethene	ND		50.0	49.6		ug/L		99	80 - 124	8	20
cis-1,3-Dichloropropene	ND		50.0	50.7		ug/L		101	67 - 130	8	20
Dibromochloromethane	ND		50.0	50.8		ug/L		102	68 - 133	3	20
1,2-Dibromo-3-Chloropropane	ND		50.0	52.4		ug/L		105	58 - 148	5	20
1,2-Dibromoethane (EDB)	ND		50.0	52.3		ug/L		105	65 - 138	0	20
1,2-Dichlorobenzene	ND		50.0	47.2		ug/L		94	80 - 124	5	20
1,3-Dichlorobenzene	ND		50.0	46.9		ug/L		94	80 - 120	3	20
1,4-Dichlorobenzene	ND		50.0	48.1		ug/L		96	80 - 120	2	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16441-A-5 MSD
Matrix: Water
Analysis Batch: 239802

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dichlorodifluoromethane	ND		50.0	50.3		ug/L		101	65 - 140	6	20
1,1-Dichloroethane	ND		50.0	49.5		ug/L		99	80 - 120	6	20
1,2-Dichloroethane	ND		50.0	51.4		ug/L		103	56 - 136	5	20
1,1-Dichloroethene	ND		50.0	49.3		ug/L		99	66 - 137	9	20
1,2-Dichloropropane	ND		50.0	49.2		ug/L		98	80 - 123	8	20
1,3-Dichloropropane	ND		50.0	50.9		ug/L		102	70 - 136	1	20
2,2-Dichloropropane	ND		50.0	48.0		ug/L		96	54 - 148	8	20
1,1-Dichloropropene	ND		50.0	48.2		ug/L		96	80 - 121	7	20
Ethylbenzene	ND		50.0	48.0		ug/L		96	80 - 121	5	20
Ethyl methacrylate	ND		50.0	55.8		ug/L		112	62 - 142	2	20
2-Hexanone	ND		50.0	55.3		ug/L		111	47 - 150	2	20
Isobutyl alcohol	ND		1250	1010		ug/L		81	48 - 150	2	20
Methacrylonitrile	ND		500	535		ug/L		107	54 - 149	4	20
Methyl bromide	ND		50.0	51.0		ug/L		102	53 - 146	5	20
Methyl chloride	ND		50.0	47.0		ug/L		94	61 - 137	9	20
Methylene bromide	ND		50.0	51.9		ug/L		104	61 - 136	5	20
Methylene Chloride	ND		50.0	51.6		ug/L		103	80 - 120	5	20
Methyl Ethyl Ketone	ND		50.0	58.5		ug/L		117	58 - 143	4	20
Methyl iodide	ND		50.0	50.0		ug/L		100	69 - 124	6	20
Methyl methacrylate	ND		100	107		ug/L		107	56 - 150	9	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	52.0		ug/L		104	53 - 150	1	20
Propionitrile	ND		500	550		ug/L		110	57 - 142	2	20
Styrene	ND		50.0	50.6		ug/L		101	44 - 150	6	20
1,1,1,2-Tetrachloroethane	ND		50.0	48.7		ug/L		97	80 - 120	5	20
1,1,2,2-Tetrachloroethane	ND		50.0	50.2		ug/L		100	60 - 150	2	20
Tetrachloroethene	ND		50.0	44.8		ug/L		90	66 - 132	6	20
Toluene	ND		50.0	46.1		ug/L		92	75 - 134	2	20
trans-1,4-Dichloro-2-butene	ND		50.0	53.8		ug/L		108	55 - 146	1	20
trans-1,2-Dichloroethene	ND		50.0	49.4		ug/L		99	79 - 121	7	20
trans-1,3-Dichloropropene	ND		50.0	50.1		ug/L		100	68 - 143	3	20
1,1,1-Trichloroethane	ND		50.0	48.6		ug/L		97	74 - 123	5	20
1,1,2-Trichloroethane	ND		50.0	49.2		ug/L		98	70 - 134	2	20
Trichloroethene	ND		50.0	47.8		ug/L		96	63 - 120	1	20
Trichlorofluoromethane	ND		50.0	46.5		ug/L		93	53 - 150	9	20
1,2,3-Trichloropropane	ND		50.0	52.0		ug/L		104	62 - 137	4	20
Vinyl acetate	ND		50.0	57.0		ug/L		114	63 - 150	4	20
Vinyl chloride	ND		50.0	46.5		ug/L		93	54 - 140	5	20
Xylenes, Total	ND		100	93.0		ug/L		93	80 - 124	7	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*71 - 139*
Dibromofluoromethane (Surr)	*101*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*102*		*76 - 121*
Toluene-d8 (Surr)	*96*		*80 - 129*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 160-239422/1-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239422

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Acenaphthylene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Acetophenone	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Acetylaminofluorene	ND		100	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Aminobiphenyl	ND		50	1.1	ug/L		03/07/16 16:12	03/15/16 17:56	1
Anthracene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[a]anthracene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[a]pyrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[b]fluoranthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[g,h,i]perylene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[k]fluoranthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzyl alcohol	ND		10	3.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Bis(2-chloroethoxy)methane	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Bis(2-chloroethyl)ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
bis(2 chloro-1-methylethyl) ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Bis(2-ethylhexyl) phthalate	ND		10	1.9	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Bromophenyl phenyl ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Butyl benzyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Chloroaniline	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Chlorobenzilate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Chloro-3-methylphenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Chloronaphthalene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Chlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Chlorophenyl phenyl ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Chrysene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Diallate	ND		20	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dibenz(a,h)anthracene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dibenzofuran	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
3,3'-Dichlorobenzidine	ND		50	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,6-Dichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Diethyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dimethoate	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
7,12-Dimethylbenz(a)anthracene	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
3,3'-Dimethylbenzidine	ND		50	2.6	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dimethylphenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dimethyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Di-n-butyl phthalate	1.18	J	10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,3-Dinitrobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,4-Dinitrobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4,6-Dinitro-2-methylphenol	ND		10	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dinitrophenol	ND		50	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dinitrotoluene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,6-Dinitrotoluene	ND		10	2.2	ug/L		03/07/16 16:12	03/15/16 17:56	1
Di-n-octyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dinoseb	ND		20	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Diphenylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Disulfoton	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-239422/1-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239422

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl methanesulfonate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Famphur	ND		100	1.7	ug/L		03/07/16 16:12	03/15/16 17:56	1
Fluoranthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Fluorene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorobutadiene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachloroethane	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorophene	ND		250	10	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachloropropene	ND		100	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Indeno[1,2,3-cd]pyrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Isodrin	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Isophorone	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Isosafrole	ND		20	5.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Kepone	ND		100	20	ug/L		03/07/16 16:12	03/15/16 17:56	1
Methapyrilene	ND		50	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1
3-Methylcholanthrene	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Methyl methanesulfonate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Methylnaphthalene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Methyl parathion	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Methylphenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
3 & 4 Methylphenol	ND		20	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Naphthalene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,4-Naphthoquinone	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1-Naphthylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Naphthylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Nitroaniline	ND		10	1.1	ug/L		03/07/16 16:12	03/15/16 17:56	1
3-Nitroaniline	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Nitroaniline	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Nitrobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
5-Nitro-o-toluidine	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Nitrophenol	ND		10	1.5	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Nitrophenol	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodiethylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodimethylamine	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodi-n-butylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosomethylethylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosomorpholine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosopiperidine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosopyrrolidine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
o,o',o''-Triethylphosphorothioate	ND		50	1.1	ug/L		03/07/16 16:12	03/15/16 17:56	1
o-Toluidine	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Parathion	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
p-Dimethylamino azobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pentachlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pentachloronitrobenzene	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pentachlorophenol	ND		50	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-239422/1-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239422

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenacetin	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Phenanthrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Phenol	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Phorate	ND		50	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
p-Phenylene diamine	ND		100	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pronamide	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pyrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Safrole	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,3,4,6-Tetrachlorophenol	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Thionazin	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,2,4-Trichlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4,5-Trichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4,6-Trichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,3,5-Trinitrobenzene	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*121*	*X*	*43 - 108*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
2-Fluorophenol (Surr)	*60*	*X*	*15 - 59*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
Nitrobenzene-d5 (Surr)	*114*	*X*	*50 - 101*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
Phenol-d5 (Surr)	*39*		*10 - 50*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
Terphenyl-d14 (Surr)	*125*	*X*	*21 - 97*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
2,4,6-Tribromophenol (Surr)	*128*	*X*	*37 - 120*	*03/07/16 16:12*	*03/15/16 17:56*	*1*

Lab Sample ID: LCS 160-239422/2-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239422

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	200	258	*	ug/L		129	58 - 108
Acenaphthylene	200	251	*	ug/L		126	59 - 110
Anthracene	200	265	*	ug/L		132	59 - 106
Benzo[a]anthracene	200	269	*	ug/L		135	56 - 105
Benzo[a]pyrene	200	374	E *	ug/L		187	54 - 109
Benzo[b]fluoranthene	200	397	E *	ug/L		198	58 - 109
Benzo[g,h,i]perylene	200	338	E *	ug/L		169	50 - 119
Benzo[k]fluoranthene	200	382	E *	ug/L		191	54 - 109
Bis(2-chloroethoxy)methane	200	258	*	ug/L		129	59 - 110
Bis(2-chloroethyl)ether	200	254	*	ug/L		127	58 - 109
bis(2 chloro-1-methylethyl) ether	200	216	*	ug/L		108	49 - 97
Bis(2-ethylhexyl) phthalate	200	285	*	ug/L		142	58 - 111
4-Bromophenyl phenyl ether	200	275	*	ug/L		137	62 - 98
Butyl benzyl phthalate	200	274	*	ug/L		137	56 - 111
4-Chloroaniline	200	203	*	ug/L		102	43 - 97
4-Chloro-3-methylphenol	200	230	*	ug/L		115	51 - 102
2-Chloronaphthalene	200	258	*	ug/L		129	58 - 109
2-Chlorophenol	200	224	*	ug/L		112	47 - 97
4-Chlorophenyl phenyl ether	200	270	*	ug/L		135	59 - 110

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 160-239422/2-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239422

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	200	277	*	ug/L		139	55 - 107
Dibenz(a,h)anthracene	200	360	E *	ug/L		180	52 - 118
Dibenzofuran	200	254	*	ug/L		127	57 - 106
3,3'-Dichlorobenzidine	200	240	*	ug/L		120	50 - 105
2,4-Dichlorophenol	200	248	*	ug/L		124	55 - 104
Diethyl phthalate	200	258	*	ug/L		129	58 - 113
2,4-Dimethylphenol	200	216	*	ug/L		108	53 - 99
Dimethyl phthalate	200	261	*	ug/L		131	60 - 114
Di-n-butyl phthalate	200	258	*	ug/L		129	60 - 105
4,6-Dinitro-2-methylphenol	200	271	*	ug/L		135	56 - 118
2,4-Dinitrophenol	200	199		ug/L		100	53 - 119
2,4-Dinitrotoluene	200	268	*	ug/L		134	57 - 117
2,6-Dinitrotoluene	200	265	*	ug/L		132	59 - 117
Di-n-octyl phthalate	200	285	*	ug/L		143	59 - 113
Diphenylamine	200	254	*	ug/L		127	58 - 102
Fluoranthene	200	264	*	ug/L		132	56 - 113
Fluorene	200	269	*	ug/L		135	61 - 113
Hexachlorobenzene	200	266	*	ug/L		133	57 - 113
Hexachlorobutadiene	200	236	*	ug/L		118	52 - 102
Hexachlorocyclopentadiene	200	234		ug/L		117	40 - 120
Hexachloroethane	200	226	*	ug/L		113	52 - 102
Indeno[1,2,3-cd]pyrene	200	358	E *	ug/L		179	49 - 120
Isophorone	200	212	*	ug/L		106	56 - 101
2-Methylnaphthalene	200	250	*	ug/L		125	54 - 101
2-Methylphenol	200	192		ug/L		96	40 - 96
3 & 4 Methylphenol	200	191	*	ug/L		96	40 - 87
Naphthalene	200	251	*	ug/L		126	54 - 98
2-Nitroaniline	200	233		ug/L		116	57 - 120
3-Nitroaniline	200	244	*	ug/L		122	47 - 113
4-Nitroaniline	200	260	*	ug/L		130	51 - 119
Nitrobenzene	200	240	*	ug/L		120	59 - 110
2-Nitrophenol	200	266	*	ug/L		133	58 - 111
4-Nitrophenol	200	80.0		ug/L		40	20 - 47
N-Nitrosodi-n-propylamine	200	237	*	ug/L		119	59 - 115
Pentachlorophenol	200	264	*	ug/L		132	49 - 115
Phenanthrene	200	263	*	ug/L		132	59 - 110
Phenol	200	81.2		ug/L		41	20 - 69
Pyrene	200	271	*	ug/L		136	55 - 105
1,2,4-Trichlorobenzene	200	242	*	ug/L		121	56 - 100
2,4,5-Trichlorophenol	200	252	*	ug/L		126	56 - 113
2,4,6-Trichlorophenol	200	265	*	ug/L		133	47 - 116

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*129*	*X*	*43 - 108*
2-Fluorophenol (Surr)	*65*	*X*	*15 - 59*
Nitrobenzene-d5 (Surr)	*120*	*X*	*50 - 101*
Phenol-d5 (Surr)	*43*		*10 - 50*
Terphenyl-d14 (Surr)	*132*	*X*	*21 - 97*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 160-239422/2-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239422

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*145*	*X*	*37 - 120*

Lab Sample ID: LCSD 160-239422/3-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239422

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			200	212		ug/L		106	58 - 108	20	20
Acenaphthylene			200	212		ug/L		106	59 - 110	17	20
Anthracene			200	218	*	ug/L		109	59 - 106	19	20
Benzo[a]anthracene			200	224	*	ug/L		112	56 - 105	18	20
Benzo[a]pyrene			200	309	E *	ug/L		155	54 - 109	19	20
Benzo[b]fluoranthene			200	326	E *	ug/L		163	58 - 109	20	20
Benzo[g,h,i]perylene			200	286	*	ug/L		143	50 - 119	17	20
Benzo[k]fluoranthene			200	309	E *	ug/L		154	54 - 109	21	20
Bis(2-chloroethoxy)methane			200	213		ug/L		107	59 - 110	19	20
Bis(2-chloroethyl)ether			200	205	*	ug/L		103	58 - 109	21	20
bis(2 chloro-1-methylethyl) ether			200	178		ug/L		89	49 - 97	19	20
Bis(2-ethylhexyl) phthalate			200	232	*	ug/L		116	58 - 111	21	20
4-Bromophenyl phenyl ether			200	224	*	ug/L		112	62 - 98	20	20
Butyl benzyl phthalate			200	227	*	ug/L		114	56 - 111	18	20
4-Chloroaniline			200	162	*	ug/L		81	43 - 97	23	20
4-Chloro-3-methylphenol			200	192		ug/L		96	51 - 102	18	20
2-Chloronaphthalene			200	212		ug/L		106	58 - 109	20	20
2-Chlorophenol			200	185		ug/L		93	47 - 97	19	20
4-Chlorophenyl phenyl ether			200	225	*	ug/L		112	59 - 110	19	20
Chrysene			200	230	*	ug/L		115	55 - 107	18	20
Dibenz(a,h)anthracene			200	305	E *	ug/L		152	52 - 118	17	20
Dibenzofuran			200	212		ug/L		106	57 - 106	18	20
3,3'-Dichlorobenzidine			200	199		ug/L		100	50 - 105	19	20
2,4-Dichlorophenol			200	203		ug/L		102	55 - 104	20	20
Diethyl phthalate			200	215		ug/L		108	58 - 113	18	20
2,4-Dimethylphenol			200	175	*	ug/L		87	53 - 99	21	20
Dimethyl phthalate			200	215		ug/L		108	60 - 114	19	20
Di-n-butyl phthalate			200	215	*	ug/L		108	60 - 105	18	20
4,6-Dinitro-2-methylphenol			200	223		ug/L		112	56 - 118	19	20
2,4-Dinitrophenol			200	178		ug/L		89	53 - 119	11	20
2,4-Dinitrotoluene			200	220		ug/L		110	57 - 117	20	20
2,6-Dinitrotoluene			200	222		ug/L		111	59 - 117	18	20
Di-n-octyl phthalate			200	239	*	ug/L		120	59 - 113	18	20
Diphenylamine			200	209	*	ug/L		104	58 - 102	20	20
Fluoranthene			200	218		ug/L		109	56 - 113	19	20
Fluorene			200	223		ug/L		112	61 - 113	19	20
Hexachlorobenzene			200	218		ug/L		109	57 - 113	20	20
Hexachlorobutadiene			200	185	*	ug/L		92	52 - 102	24	20
Hexachlorocyclopentadiene			200	186	*	ug/L		93	40 - 120	23	20
Hexachloroethane			200	174	*	ug/L		87	52 - 102	26	20
Indeno[1,2,3-cd]pyrene			200	301	E *	ug/L		150	49 - 120	17	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 160-239422/3-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239422

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Isophorone	200	175		ug/L		88	56 - 101	19	20
2-Methylnaphthalene	200	202	*	ug/L		101	54 - 101	21	20
2-Methylphenol	200	157		ug/L		79	40 - 96	20	20
3 & 4 Methylphenol	200	161		ug/L		80	40 - 87	18	20
Naphthalene	200	202	*	ug/L		101	54 - 98	22	20
2-Nitroaniline	200	191		ug/L		96	57 - 120	20	20
3-Nitroaniline	200	201		ug/L		100	47 - 113	19	20
4-Nitroaniline	200	215		ug/L		107	51 - 119	19	20
Nitrobenzene	200	198		ug/L		99	59 - 110	19	20
2-Nitrophenol	200	219		ug/L		110	58 - 111	19	20
4-Nitrophenol	200	72.0		ug/L		36	20 - 47	11	20
N-Nitrosodi-n-propylamine	200	196		ug/L		98	59 - 115	19	20
Pentachlorophenol	200	218		ug/L		109	49 - 115	19	20
Phenanthrene	200	218		ug/L		109	59 - 110	19	20
Phenol	200	72.1		ug/L		36	20 - 69	12	20
Pyrene	200	227	*	ug/L		113	55 - 105	18	20
1,2,4-Trichlorobenzene	200	192	*	ug/L		96	56 - 100	23	20
2,4,5-Trichlorophenol	200	211		ug/L		105	56 - 113	18	20
2,4,6-Trichlorophenol	200	222		ug/L		111	47 - 116	18	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*106*		*43 - 108*
2-Fluorophenol (Surr)	*56*		*15 - 59*
Nitrobenzene-d5 (Surr)	*99*		*50 - 101*
Phenol-d5 (Surr)	*38*		*10 - 50*
Terphenyl-d14 (Surr)	*109*	*X*	*21 - 97*
2,4,6-Tribromophenol (Surr)	*123*	*X*	*37 - 120*

Lab Sample ID: MB 160-239800/1-A
Matrix: Water
Analysis Batch: 240800

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239800

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Acenaphthylene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Acetophenone	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2-Acetylaminofluorene	ND		100	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
4-Aminobiphenyl	ND		50	1.1	ug/L		03/09/16 14:36	03/16/16 16:31	1
Anthracene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Benzo[a]anthracene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Benzo[a]pyrene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Benzo[b]fluoranthene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Benzo[g,h,i]perylene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Benzo[k]fluoranthene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Benzyl alcohol	ND		10	3.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Bis(2-chloroethoxy)methane	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Bis(2-chloroethyl)ether	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
bis(2 chloro-1-methylethyl) ether	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-239800/1-A
Matrix: Water
Analysis Batch: 240800

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239800

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		10	1.9	ug/L		03/09/16 14:36	03/16/16 16:31	1
4-Bromophenyl phenyl ether	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Butyl benzyl phthalate	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
4-Chloroaniline	ND		10	2.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Chlorobenzilate	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
4-Chloro-3-methylphenol	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2-Chloronaphthalene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2-Chlorophenol	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
4-Chlorophenyl phenyl ether	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Chrysene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Diallate	ND		20	2.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Dibenz(a,h)anthracene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Dibenzofuran	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
3,3'-Dichlorobenzidine	ND		50	1.3	ug/L		03/09/16 14:36	03/16/16 16:31	1
2,4-Dichlorophenol	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2,6-Dichlorophenol	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Diethyl phthalate	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Dimethoate	ND		20	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
7,12-Dimethylbenz(a)anthracene	ND		20	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
3,3'-Dimethylbenzidine	ND		50	2.6	ug/L		03/09/16 14:36	03/16/16 16:31	1
2,4-Dimethylphenol	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Dimethyl phthalate	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Di-n-butyl phthalate	1.06	J	10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
1,3-Dinitrobenzene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
1,4-Dinitrobenzene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
4,6-Dinitro-2-methylphenol	ND		10	1.3	ug/L		03/09/16 14:36	03/16/16 16:31	1
2,4-Dinitrophenol	ND		50	2.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2,4-Dinitrotoluene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2,6-Dinitrotoluene	ND		10	2.2	ug/L		03/09/16 14:36	03/16/16 16:31	1
Di-n-octyl phthalate	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Dinoseb	ND		20	2.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Diphenylamine	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Disulfoton	ND		50	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Ethyl methanesulfonate	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Famphur	ND		100	1.7	ug/L		03/09/16 14:36	03/16/16 16:31	1
Fluoranthene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Fluorene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Hexachlorobenzene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Hexachlorobutadiene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Hexachloroethane	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Hexachlorophene	ND		250	10	ug/L		03/09/16 14:36	03/16/16 16:31	1
Hexachloropropene	ND		100	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Indeno[1,2,3-cd]pyrene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Isodrin	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Isophorone	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Isosafrole	ND		20	5.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Methapyrilene	ND		50	1.3	ug/L		03/09/16 14:36	03/16/16 16:31	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-239800/1-A
Matrix: Water
Analysis Batch: 240800

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239800

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Methylcholanthrene	ND		20	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Methyl methanesulfonate	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2-Methylnaphthalene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Methyl parathion	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2-Methylphenol	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
3 & 4 Methylphenol	ND		20	2.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Naphthalene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
1,4-Naphthoquinone	ND		50	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
1-Naphthylamine	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2-Naphthylamine	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2-Nitroaniline	ND		10	1.1	ug/L		03/09/16 14:36	03/16/16 16:31	1
3-Nitroaniline	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
4-Nitroaniline	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Nitrobenzene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
5-Nitro-o-toluidine	ND		20	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2-Nitrophenol	ND		10	1.5	ug/L		03/09/16 14:36	03/16/16 16:31	1
4-Nitrophenol	ND		10	2.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
N-Nitrosodiethylamine	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
N-Nitrosodimethylamine	ND		10	2.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
N-Nitrosodi-n-butylamine	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/L		03/09/16 14:36	03/16/16 16:31	1
N-Nitrosomethylethylamine	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
N-Nitrosomorpholine	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
N-Nitrosopiperidine	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
N-Nitrosopyrrolidine	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
o,o',o''-Triethylphosphorothioate	ND		50	1.1	ug/L		03/09/16 14:36	03/16/16 16:31	1
o-Toluidine	ND		20	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Parathion	ND		50	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
p-Dimethylamino azobenzene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Pentachlorobenzene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Pentachloronitrobenzene	ND		50	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Pentachlorophenol	ND		50	1.3	ug/L		03/09/16 14:36	03/16/16 16:31	1
Phenacetin	ND		20	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Phenanthrene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Phenol	ND		10	2.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Phorate	ND		50	2.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
p-Phenylene diamine	ND		100	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Pronamide	ND		20	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Pyrene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Safrole	ND		20	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2,3,4,6-Tetrachlorophenol	ND		50	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
Thionazin	ND		50	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
1,2,4-Trichlorobenzene	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2,4,5-Trichlorophenol	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
2,4,6-Trichlorophenol	ND		10	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1
1,3,5-Trinitrobenzene	ND		50	1.0	ug/L		03/09/16 14:36	03/16/16 16:31	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-239800/1-A
Matrix: Water
Analysis Batch: 240800

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239800

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	117	X	43 - 108	03/09/16 14:36	03/16/16 16:31	1
2-Fluorophenol (Surr)	59		15 - 59	03/09/16 14:36	03/16/16 16:31	1
Nitrobenzene-d5 (Surr)	124	X	50 - 101	03/09/16 14:36	03/16/16 16:31	1
Phenol-d5 (Surr)	39		10 - 50	03/09/16 14:36	03/16/16 16:31	1
Terphenyl-d14 (Surr)	124	X	21 - 97	03/09/16 14:36	03/16/16 16:31	1
2,4,6-Tribromophenol (Surr)	118		37 - 120	03/09/16 14:36	03/16/16 16:31	1

Lab Sample ID: LCS 160-239800/2-A
Matrix: Water
Analysis Batch: 240800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239800

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	200	282	*	ug/L		141	58 - 108
Acenaphthylene	200	271	*	ug/L		135	59 - 110
Anthracene	200	286	*	ug/L		143	59 - 106
Benzo[a]anthracene	200	296	*	ug/L		148	56 - 105
Benzo[a]pyrene	200	417	E *	ug/L		208	54 - 109
Benzo[b]fluoranthene	200	436	E *	ug/L		218	58 - 109
Benzo[g,h,i]perylene	200	446	E *	ug/L		223	50 - 119
Benzo[k]fluoranthene	200	430	E *	ug/L		215	54 - 109
Bis(2-chloroethoxy)methane	200	284	*	ug/L		142	59 - 110
Bis(2-chloroethyl)ether	200	277	*	ug/L		138	58 - 109
bis(2 chloro-1-methylethyl) ether	200	265	*	ug/L		133	49 - 97
Bis(2-ethylhexyl) phthalate	200	300	*	ug/L		150	58 - 111
4-Bromophenyl phenyl ether	200	298	*	ug/L		149	62 - 98
Butyl benzyl phthalate	200	293	*	ug/L		146	56 - 111
4-Chloroaniline	200	214	*	ug/L		107	43 - 97
4-Chloro-3-methylphenol	200	270	*	ug/L		135	51 - 102
2-Chloronaphthalene	200	276	*	ug/L		138	58 - 109
2-Chlorophenol	200	239	*	ug/L		120	47 - 97
4-Chlorophenyl phenyl ether	200	291	*	ug/L		146	59 - 110
Chrysene	200	292	*	ug/L		146	55 - 107
Dibenz(a,h)anthracene	200	457	E *	ug/L		228	52 - 118
Dibenzofuran	200	282	*	ug/L		141	57 - 106
3,3'-Dichlorobenzidine	200	267	*	ug/L		134	50 - 105
2,4-Dichlorophenol	200	267	*	ug/L		133	55 - 104
Diethyl phthalate	200	292	*	ug/L		146	58 - 113
2,4-Dimethylphenol	200	247	*	ug/L		123	53 - 99
Dimethyl phthalate	200	282	*	ug/L		141	60 - 114
Di-n-butyl phthalate	200	290	*	ug/L		145	60 - 105
4,6-Dinitro-2-methylphenol	200	276	*	ug/L		138	56 - 118
2,4-Dinitrophenol	200	190		ug/L		95	53 - 119
2,4-Dinitrotoluene	200	293	*	ug/L		146	57 - 117
2,6-Dinitrotoluene	200	278	*	ug/L		139	59 - 117
Di-n-octyl phthalate	200	304	E *	ug/L		152	59 - 113
Diphenylamine	200	274	*	ug/L		137	58 - 102
Fluoranthene	200	290	*	ug/L		145	56 - 113
Fluorene	200	294	*	ug/L		147	61 - 113

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 160-239800/2-A
Matrix: Water
Analysis Batch: 240800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239800

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobenzene	200	286	*	ug/L		143	57 - 113
Hexachlorobutadiene	200	268	*	ug/L		134	52 - 102
Hexachlorocyclopentadiene	200	264	*	ug/L		132	40 - 120
Hexachloroethane	200	255	*	ug/L		128	52 - 102
Indeno[1,2,3-cd]pyrene	200	468	E *	ug/L		234	49 - 120
Isophorone	200	247	*	ug/L		124	56 - 101
2-Methylnaphthalene	200	282	*	ug/L		141	54 - 101
2-Methylphenol	200	207	*	ug/L		104	40 - 96
3 & 4 Methylphenol	200	210	*	ug/L		105	40 - 87
Naphthalene	200	274	*	ug/L		137	54 - 98
2-Nitroaniline	200	286	*	ug/L		143	57 - 120
3-Nitroaniline	200	255	*	ug/L		128	47 - 113
4-Nitroaniline	200	267	*	ug/L		134	51 - 119
Nitrobenzene	200	293	*	ug/L		146	59 - 110
2-Nitrophenol	200	282	*	ug/L		141	58 - 111
4-Nitrophenol	200	102	*	ug/L		51	20 - 47
N-Nitrosodi-n-propylamine	200	282	*	ug/L		141	59 - 115
Pentachlorophenol	200	239	*	ug/L		120	49 - 115
Phenanthrene	200	290	*	ug/L		145	59 - 110
Phenol	200	88.1		ug/L		44	20 - 69
Pyrene	200	298	*	ug/L		149	55 - 105
1,2,4-Trichlorobenzene	200	261	*	ug/L		131	56 - 100
2,4,5-Trichlorophenol	200	272	*	ug/L		136	56 - 113
2,4,6-Trichlorophenol	200	288	*	ug/L		144	47 - 116

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*138*	*X*	*43 - 108*
2-Fluorophenol (Surr)	*71*	*X*	*15 - 59*
Nitrobenzene-d5 (Surr)	*143*	*X*	*50 - 101*
Phenol-d5 (Surr)	*46*		*10 - 50*
Terphenyl-d14 (Surr)	*140*	*X*	*21 - 97*
2,4,6-Tribromophenol (Surr)	*151*	*X*	*37 - 120*

Lab Sample ID: LCSD 160-239800/3-A
Matrix: Water
Analysis Batch: 240800

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239800

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	200	218	*	ug/L		109	58 - 108	26	20
Acenaphthylene	200	214	*	ug/L		107	59 - 110	24	20
Anthracene	200	232	*	ug/L		116	59 - 106	21	20
Benzo[a]anthracene	200	232	*	ug/L		116	56 - 105	24	20
Benzo[a]pyrene	200	314	* E	ug/L		157	54 - 109	28	20
Benzo[b]fluoranthene	200	325	* E	ug/L		163	58 - 109	29	20
Benzo[g,h,i]perylene	200	327	* E	ug/L		164	50 - 119	31	20
Benzo[k]fluoranthene	200	320	* E	ug/L		160	54 - 109	29	20
Bis(2-chloroethoxy)methane	200	217	*	ug/L		109	59 - 110	27	20
Bis(2-chloroethyl)ether	200	217	*	ug/L		108	58 - 109	24	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 160-239800/3-A
Matrix: Water
Analysis Batch: 240800

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239800

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
bis(2 chloro-1-methylethyl) ether	200	214	*	ug/L		107	49 - 97	21	20
Bis(2-ethylhexyl) phthalate	200	233	*	ug/L		116	58 - 111	25	20
4-Bromophenyl phenyl ether	200	234	*	ug/L		117	62 - 98	24	20
Butyl benzyl phthalate	200	229	*	ug/L		115	56 - 111	24	20
4-Chloroaniline	200	160	*	ug/L		80	43 - 97	29	20
4-Chloro-3-methylphenol	200	204	*	ug/L		102	51 - 102	28	20
2-Chloronaphthalene	200	214	*	ug/L		107	58 - 109	25	20
2-Chlorophenol	200	188	*	ug/L		94	47 - 97	24	20
4-Chlorophenyl phenyl ether	200	229	*	ug/L		115	59 - 110	24	20
Chrysene	200	231	*	ug/L		115	55 - 107	24	20
Dibenz(a,h)anthracene	200	342	* E	ug/L		171	52 - 118	29	20
Dibenzofuran	200	221	*	ug/L		110	57 - 106	24	20
3,3'-Dichlorobenzidine	200	209	*	ug/L		105	50 - 105	24	20
2,4-Dichlorophenol	200	208	*	ug/L		104	55 - 104	25	20
Diethyl phthalate	200	232	*	ug/L		116	58 - 113	23	20
2,4-Dimethylphenol	200	187	*	ug/L		93	53 - 99	28	20
Dimethyl phthalate	200	224	*	ug/L		112	60 - 114	23	20
Di-n-butyl phthalate	200	226	*	ug/L		113	60 - 105	25	20
4,6-Dinitro-2-methylphenol	200	212	*	ug/L		106	56 - 118	26	20
2,4-Dinitrophenol	200	159		ug/L		80	53 - 119	18	20
2,4-Dinitrotoluene	200	232	*	ug/L		116	57 - 117	23	20
2,6-Dinitrotoluene	200	223	*	ug/L		111	59 - 117	22	20
Di-n-octyl phthalate	200	230	*	ug/L		115	59 - 113	28	20
Diphenylamine	200	212	*	ug/L		106	58 - 102	25	20
Fluoranthene	200	225	*	ug/L		113	56 - 113	25	20
Fluorene	200	231	*	ug/L		115	61 - 113	24	20
Hexachlorobenzene	200	222	*	ug/L		111	57 - 113	25	20
Hexachlorobutadiene	200	195	*	ug/L		97	52 - 102	32	20
Hexachlorocyclopentadiene	200	195	*	ug/L		97	40 - 120	30	20
Hexachloroethane	200	190	*	ug/L		95	52 - 102	29	20
Indeno[1,2,3-cd]pyrene	200	350	* E	ug/L		175	49 - 120	29	20
Isophorone	200	192	*	ug/L		96	56 - 101	25	20
2-Methylnaphthalene	200	205	*	ug/L		102	54 - 101	32	20
2-Methylphenol	200	164	*	ug/L		82	40 - 96	23	20
3 & 4 Methylphenol	200	169	*	ug/L		85	40 - 87	22	20
Naphthalene	200	204	*	ug/L		102	54 - 98	29	20
2-Nitroaniline	200	231	*	ug/L		115	57 - 120	21	20
3-Nitroaniline	200	197	*	ug/L		99	47 - 113	26	20
4-Nitroaniline	200	216	*	ug/L		108	51 - 119	21	20
Nitrobenzene	200	223	*	ug/L		111	59 - 110	27	20
2-Nitrophenol	200	213	*	ug/L		106	58 - 111	28	20
4-Nitrophenol	200	87.9		ug/L		44	20 - 47	15	20
N-Nitrosodi-n-propylamine	200	223	*	ug/L		111	59 - 115	23	20
Pentachlorophenol	200	180	*	ug/L		90	49 - 115	28	20
Phenanthrene	200	227	*	ug/L		114	59 - 110	24	20
Phenol	200	73.9		ug/L		37	20 - 69	18	20
Pyrene	200	226	*	ug/L		113	55 - 105	27	20
1,2,4-Trichlorobenzene	200	195	*	ug/L		97	56 - 100	29	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 160-239800/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240800 — **Prep Batch: 239800**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-Trichlorophenol			200	218	*	ug/L		109	56 - 113	22	20
2,4,6-Trichlorophenol			200	226	*	ug/L		113	47 - 116	24	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*106*		*43 - 108*
2-Fluorophenol (Surr)	*60*	*X*	*15 - 59*
Nitrobenzene-d5 (Surr)	*110*	*X*	*50 - 101*
Phenol-d5 (Surr)	*39*		*10 - 50*
Terphenyl-d14 (Surr)	*108*	*X*	*21 - 97*
2,4,6-Tribromophenol (Surr)	*117*		*37 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Lab Sample ID: MB 160-239800/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242481 — **Prep Batch: 239800**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kepone - RA	ND		100	20	ug/L		03/09/16 14:36	03/28/16 21:04	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-241586/9 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241586

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.010	mg/L			03/22/16 15:58	1
Sulfate	ND		0.50	0.050	mg/L			03/22/16 15:58	1
Chloride	ND		0.20	0.020	mg/L			03/22/16 15:58	1

Lab Sample ID: LCS 160-241586/10 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241586

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride			1.00	1.00		mg/L		100	90 - 110		
Sulfate			8.00	7.73		mg/L		97	90 - 110		
Chloride			2.00	1.96		mg/L		98	90 - 110		

Lab Sample ID: 160-16445-J-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241586

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride	1.7	F1	2.00	3.94	E F1	mg/L		114	90 - 110		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 160-16445-J-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241586

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Fluoride	1.7	F1		1.63		mg/L				2	20

Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 160-16445-J-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241586

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate - DL	59		160	216		mg/L		98	90 - 110		
Chloride - DL	92		80.0	174		mg/L		102	90 - 110		

Lab Sample ID: 160-16445-J-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241586

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfate - DL	59			58.5		mg/L				0.4	20
Chloride - DL	92			93.1		mg/L				0.7	20

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-239794/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243457 — **Prep Batch: 239794**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	3.7	ug/L		03/09/16 13:27	04/02/16 02:54	1
Barium	ND		50	2.1	ug/L		03/09/16 13:27	04/02/16 02:54	1
Beryllium	ND		5.0	0.28	ug/L		03/09/16 13:27	04/02/16 02:54	1
Boron	ND	^	50	7.2	ug/L		03/09/16 13:27	04/02/16 02:54	1
Cadmium	ND		5.0	0.34	ug/L		03/09/16 13:27	04/02/16 02:54	1
CaHard	60.2	J	1000	54	ug/L		03/09/16 13:27	04/02/16 02:54	1
Calcium	ND		1000	54	ug/L		03/09/16 13:27	04/02/16 02:54	1
Cobalt	ND		50	2.7	ug/L		03/09/16 13:27	04/02/16 02:54	1
Copper	ND		25	2.1	ug/L		03/09/16 13:27	04/02/16 02:54	1
Iron	ND		100	13	ug/L		03/09/16 13:27	04/02/16 02:54	1
Lead	ND		10	0.60	ug/L		03/09/16 13:27	04/02/16 02:54	1
Magnesium	ND		1.0	0.051	mg/L		03/09/16 13:27	04/02/16 02:54	1
Manganese	ND		15	1.0	ug/L		03/09/16 13:27	04/02/16 02:54	1
MgHard	51.9	J	1000	51	ug/L		03/09/16 13:27	04/02/16 02:54	1
Nickel	ND		0.040	0.0026	mg/L		03/09/16 13:27	04/02/16 02:54	1
Phosphorus	28.7	J ^	250	14	ug/L		03/09/16 13:27	04/02/16 02:54	1
Selenium	ND		15	2.1	ug/L		03/09/16 13:27	04/02/16 02:54	1
Silver	ND		20	0.99	ug/L		03/09/16 13:27	04/02/16 02:54	1
Sodium	ND		1000	110	ug/L		03/09/16 13:27	04/02/16 02:54	1
Thallium	ND		20	2.4	ug/L		03/09/16 13:27	04/02/16 02:54	1
Total Hardness	ND		5000	1700	ug/L		03/09/16 13:27	04/02/16 02:54	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 160-239794/1-A
Matrix: Water
Analysis Batch: 243457

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239794

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	ND		50	4.4	ug/L		03/09/16 13:27	04/02/16 02:54	1
Zinc	ND		20	8.3	ug/L		03/09/16 13:27	04/02/16 02:54	1

Lab Sample ID: MB 160-239794/1-A
Matrix: Water
Analysis Batch: 244889

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239794

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.30	J	10	1.8	ug/L		03/09/16 13:27	04/06/16 17:06	1
Chromium	ND		10	3.4	ug/L		03/09/16 13:27	04/06/16 17:06	1

Lab Sample ID: LCS 160-239794/2-A
Matrix: Water
Analysis Batch: 243457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239794

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	510		ug/L		102	80 - 120
Barium	1000	1020		ug/L		102	80 - 120
Beryllium	1000	1010		ug/L		101	80 - 120
Boron	2000	2030	^	ug/L		102	80 - 120
Cadmium	1000	1020		ug/L		102	80 - 120
Calcium	10000	11100		ug/L		111	80 - 120
Cobalt	1000	1090		ug/L		109	80 - 120
Copper	1000	1040		ug/L		104	80 - 120
Iron	10000	10000		ug/L		100	80 - 120
Lead	1000	1050		ug/L		105	80 - 120
Magnesium	10.0	10.1		mg/L		101	80 - 120
Manganese	1000	1010		ug/L		101	80 - 120
Nickel	1.00	1.07		mg/L		107	80 - 120
Phosphorus	1000	1110	^	ug/L		111	80 - 120
Selenium	500	503		ug/L		101	80 - 120
Silver	200	207		ug/L		103	80 - 120
Sodium	10000	10100		ug/L		101	80 - 120
Thallium	200	217		ug/L		109	80 - 120
Vanadium	1000	1000		ug/L		100	80 - 120
Zinc	1000	1020		ug/L		102	80 - 120

Lab Sample ID: LCS 160-239794/2-A
Matrix: Water
Analysis Batch: 244889

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239794

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	944		ug/L		94	80 - 120
Chromium	1000	1000		ug/L		100	80 - 120

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 160-16308-1 MS — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243457 — **Prep Batch: 239794**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		500	530		ug/L		106	75 - 125
Barium	180	J	1000	1200		ug/L		102	75 - 125
Beryllium	ND		1000	1030		ug/L		103	75 - 125
Boron	57	J ^	2000	2120	^	ug/L		103	75 - 125
Cadmium	ND		1000	1060		ug/L		106	75 - 125
Calcium	130000		10000	134000	4	ug/L		41	75 - 125
Cobalt	ND		1000	1100		ug/L		110	75 - 125
Copper	ND		1000	1070		ug/L		107	75 - 125
Iron	1500		10000	11700		ug/L		102	75 - 125
Lead	ND		1000	1080		ug/L		108	75 - 125
Magnesium	60		10.0	68.7	4	mg/L		90	75 - 125
Manganese	140		1000	1150		ug/L		101	75 - 125
Nickel	ND		1.00	1.10		mg/L		110	75 - 125
Phosphorus	ND	^	1000	1160	J ^	ug/L		116	75 - 125
Selenium	ND		500	534		ug/L		107	75 - 125
Silver	ND		200	212		ug/L		106	75 - 125
Sodium	45000		10000	54500	4	ug/L		91	75 - 125
Thallium	13	J	200	231		ug/L		109	75 - 125
Vanadium	31	J	1000	1040		ug/L		101	75 - 125
Zinc	42	J	1000	1110		ug/L		106	75 - 125

Lab Sample ID: 160-16308-1 MS — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244889 — **Prep Batch: 239794**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1000	969		ug/L		97	75 - 125
Chromium	ND		1000	1030		ug/L		103	75 - 125

Lab Sample ID: 160-16308-1 MSD — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243457 — **Prep Batch: 239794**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		500	531		ug/L		106	75 - 125	0	20
Barium	180	J	1000	1160		ug/L		98	75 - 125	3	20
Beryllium	ND		1000	993		ug/L		99	75 - 125	4	20
Boron	57	J ^	2000	2050	^	ug/L		100	75 - 125	3	20
Cadmium	ND		1000	1090		ug/L		109	75 - 125	2	20
Calcium	130000		10000	138000	4	ug/L		75	75 - 125	2	20
Cobalt	ND		1000	1130		ug/L		113	75 - 125	2	20
Copper	ND		1000	1090		ug/L		109	75 - 125	2	20
Iron	1500		10000	11300		ug/L		97	75 - 125	4	20
Lead	ND		1000	1110		ug/L		111	75 - 125	3	20
Magnesium	60		10.0	66.7	4	mg/L		70	75 - 125	3	20
Manganese	140		1000	1110		ug/L		97	75 - 125	4	20
Nickel	ND		1.00	1.12		mg/L		112	75 - 125	2	20
Phosphorus	ND	^	1000	1180	J ^	ug/L		118	75 - 125	1	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 160-16308-1 MSD — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243457 — **Prep Batch: 239794**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Selenium	ND		500	537		ug/L		107	75 - 125	1	20
Silver	ND		200	214		ug/L		107	75 - 125	1	20
Sodium	45000		10000	53800	4	ug/L		84	75 - 125	1	20
Thallium	13	J	200	240		ug/L		114	75 - 125	4	20
Vanadium	31	J	1000	969		ug/L		94	75 - 125	7	20
Zinc	42	J	1000	1120		ug/L		108	75 - 125	2	20

Lab Sample ID: 160-16308-1 MSD — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244889 — **Prep Batch: 239794**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1000	968		ug/L		97	75 - 125	0	20
Chromium	ND		1000	1010		ug/L		101	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-241336/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 19:26	1

Lab Sample ID: LCS 160-241336/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.84		ug/L		97	80 - 120

Lab Sample ID: 160-16343-A-2-D MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		5.00	4.82		ug/L		96	80 - 120

Lab Sample ID: 160-16343-A-2-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		5.00	4.66		ug/L		93	80 - 120	3	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 160-239354/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239354

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		5.0	3.5	mg/L			03/07/16 08:39	1

Lab Sample ID: LCS 160-239354/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239354

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	500	494		mg/L		99	90 - 110

Lab Sample ID: 160-16308-1 DU — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239354

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	610		611		mg/L		1	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 160-242745/11 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242745

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.050	0.0083	mg/L			03/28/16 17:24	1

Lab Sample ID: LCS 160-242745/12 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242745

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.500	0.514		mg/L		103	90 - 110

Lab Sample ID: 160-16308-1 MS — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242745

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	ND		0.500	0.545		mg/L		109	90 - 110

Lab Sample ID: 160-16308-1 DU — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242745

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia	ND		ND		mg/L		NC	20

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MB 160-242771/12 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.050	0.0083	mg/L			03/29/16 14:44	1

Lab Sample ID: LCS 160-242771/13 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.500	0.518		mg/L		104	90 - 110

Lab Sample ID: 160-16344-D-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	ND	F1	0.500	0.570	F1	mg/L		114	90 - 110

Lab Sample ID: 160-16344-D-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia	ND	F1	ND		mg/L		NC	20

Method: 353.1 Preserved - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 160-240661/15 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite	ND		0.050	0.0047	mg/L			03/15/16 17:20	1

Lab Sample ID: LCS 160-240661/16 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate/Nitrite	0.500	0.484		mg/L		97	90 - 110

Lab Sample ID: 160-16308-1 MS — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate/Nitrite	ND	F1	0.500	0.446	F1	mg/L		89	90 - 110

Method: 353.1 Preserved - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 160-16308-1 DU — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrate/Nitrite	ND	F1		ND		mg/L				NC	20

Method: 410.4 - COD

Lab Sample ID: MB 160-239667/3-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	6.5	mg/L		03/09/16 09:08	03/09/16 13:45	1

Lab Sample ID: LCS 160-239667/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand			50.0	49.0		mg/L		98	90 - 110		

Lab Sample ID: 160-16308-1 MS — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand	ND		50.0	52.0		mg/L		104	90 - 110		

Lab Sample ID: 160-16308-1 DU — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chemical Oxygen Demand	ND			ND		mg/L				NC	20

Method: 415.1 - TOC

Lab Sample ID: MB 160-242129/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.35	mg/L			03/23/16 18:30	1

Lab Sample ID: LCS 160-242129/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			10.0	9.74		mg/L		97	90 - 110		

Method: 415.1 - TOC (Continued)

Lab Sample ID: 160-16308-1 MS — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	1.3		5.00	6.34		mg/L		100	76 - 120

Lab Sample ID: 160-16308-1 DU — **Client Sample ID: PZ-105-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	1.3		1.24		mg/L		7	20

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-239033/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242288 — **Prep Batch: 239033**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.02140	U	0.0431	0.0432	1.00	0.0897	pCi/L	03/03/16 13:33	03/26/16 18:43	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*03/03/16 13:33*	*03/26/16 18:43*	*1*

Lab Sample ID: LCS 160-239033/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242288 — **Prep Batch: 239033**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226			11.2	11.60		1.13	1.00	0.0592	pCi/L	104	68 - 137

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*104*		*40 - 110*

Lab Sample ID: 500-108175-Y-2-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242289 — **Prep Batch: 239033**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	2.63		11.2	15.90		1.53	1.00	0.0819	pCi/L	119	75 - 138	0.05	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*77.5*		*40 - 110*

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 500-108175-Z-2-A MS
Matrix: Water
Analysis Batch: 242289

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 239033

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	2.63		11.2	15.73		1.52	1.00	0.0941	pCi/L	117	75 - 138

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*81.8*		*40 - 110*

Lab Sample ID: MB 160-239583/1-A
Matrix: Water
Analysis Batch: 242941

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239583

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.001703	U	0.0324	0.0324	1.00	0.0668	pCi/L	03/08/16 12:46	03/30/16 07:50	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*03/08/16 12:46*	*03/30/16 07:50*	*1*

Lab Sample ID: LCS 160-239583/2-A
Matrix: Water
Analysis Batch: 242941

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239583

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226			11.2	13.35		1.29	1.00	0.0968	pCi/L	120	68 - 137

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*107*		*40 - 110*

Lab Sample ID: LCSD 160-239583/3-A
Matrix: Water
Analysis Batch: 242941

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239583

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.2	13.29		1.29	1.00	0.0906	pCi/L	119	68 - 137	0.02	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-239366/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241274 — **Prep Batch: 239366**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.1202	U	0.214	0.214	1.00	0.401	pCi/L	03/07/16 10:18	03/18/16 09:44	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*03/07/16 10:18*	*03/18/16 09:44*	*1*
Y Carrier	*83.4*		*40 - 110*	*03/07/16 10:18*	*03/18/16 09:44*	*1*

Lab Sample ID: LCS 160-239366/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241274 — **Prep Batch: 239366**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			9.27	10.02		1.20	1.00	0.489	pCi/L	108	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*104*		*40 - 110*
Y Carrier	*67.3*		*40 - 110*

Lab Sample ID: 500-108175-Y-2-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241106 — **Prep Batch: 239366**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	3.53		9.27	14.75		1.67	1.00	0.607	pCi/L	121	45 - 150	0.19	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*77.5*		*40 - 110*
Y Carrier	*85.6*		*40 - 110*

Lab Sample ID: 500-108175-Z-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241274 — **Prep Batch: 239366**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228	3.53		9.27	15.40		1.70	1.00	0.323	pCi/L	128	45 - 150		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*81.8*		*40 - 110*
Y Carrier	*82.6*		*40 - 110*

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-239662/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241797 — **Prep Batch: 239662**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.07816	U	0.218	0.218	1.00	0.376	pCi/L	03/09/16 08:31	03/23/16 12:08	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*03/09/16 08:31*	*03/23/16 12:08*	*1*
Y Carrier	*80.4*		*40 - 110*	*03/09/16 08:31*	*03/23/16 12:08*	*1*

Lab Sample ID: LCS 160-239662/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241797 — **Prep Batch: 239662**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			15.4	9.740		1.10	1.00	0.372	pCi/L	63	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*107*		*40 - 110*
Y Carrier	*80.7*		*40 - 110*

Lab Sample ID: LCSD 160-239662/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241797 — **Prep Batch: 239662**

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			15.4	10.46		1.17	1.00	0.402	pCi/L	68	56 - 140	0.32	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*
Y Carrier	*81.9*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-241366/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241772 — **Prep Batch: 241366**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	69.82	U	221	221	500	393	pCi/L	03/21/16 12:52	03/22/16 12:44	1

Method: 906.0 - Tritium, Total (LSC) (Continued)

Lab Sample ID: LCS 160-241366/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241772 — **Prep Batch: 241366**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium			4660	4597		698	500	385	pCi/L	99	74 - 114		

Lab Sample ID: 160-16516-A-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241772 — **Prep Batch: 241366**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium	140000		4660	138800		12600	500	391	pCi/L	-29	67 - 130		

Lab Sample ID: 160-16516-A-1-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241772 — **Prep Batch: 241366**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Tritium	120000			119900		10900	500	393	pCi/L			0.02	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Lab Sample ID: MB 160-240784/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242366 — **Prep Batch: 240784**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.2218		0.106	0.108	1.00	0.112	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Thorium-229	*85.7*		*30 - 110*	*03/16/16 09:50*	*03/24/16 18:20*	*1*

Lab Sample ID: LCS 160-240784/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242377 — **Prep Batch: 240784**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Thorium-230			8.03	8.806		0.938	1.00	0.113	pCi/L	110	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Thorium-229	*90.8*		*30 - 110*

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-16308-1 DU
Matrix: Water
Analysis Batch: 242305

Client Sample ID: PZ-105-SS
Prep Type: Total/NA
Prep Batch: 240784

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Thorium-230	0.206			0.1600		0.0864	1.00	0.0800	pCi/L			0.25	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Thorium-229	*89.3*		*30 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-240794/1-A
Matrix: Water
Analysis Batch: 241974

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240794

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.03617	U	0.0548	0.0549	1.00	0.0950	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-235/236	0.002143	U	0.0299	0.0299	1.00	0.0846	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-238	0.02063	U	0.0292	0.0292	1.00	0.0309	pCi/L	03/16/16 09:50	03/23/16 12:15	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*87.3*		*30 - 110*	*03/16/16 09:50*	*03/23/16 12:15*	*1*

Lab Sample ID: LCS 160-240794/2-A
Matrix: Water
Analysis Batch: 241976

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240794

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			12.7	13.02		1.32	1.00	0.0971	pCi/L	102	84 - 120		
Uranium-238			13.0	13.21		1.34	1.00	0.0316	pCi/L	101	83 - 121		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*85.2*		*30 - 110*

Lab Sample ID: 160-16308-1 DU
Matrix: Water
Analysis Batch: 241978

Client Sample ID: PZ-105-SS
Prep Type: Total/NA
Prep Batch: 240794

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Uranium-233/234	1.44			1.644		0.300	1.00	0.0853	pCi/L			0.35	1
Uranium-235/236	0.0656			0.02086	U	0.0389	1.00	0.0728	pCi/L			0.46	1
Uranium-238	1.05			0.9948		0.223	1.00	0.0695	pCi/L			0.13	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-16308-1 DU
Matrix: Water
Analysis Batch: 241978

Client Sample ID: PZ-105-SS
Prep Type: Total/NA
Prep Batch: 240794

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*81.8*		*30 - 110*

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

GC/MS VOA

Analysis Batch: 239097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	8260C	
160-16308-1 MS	PZ-105-SS	Total/NA	Water	8260C	
160-16308-1 MSD	PZ-105-SS	Total/NA	Water	8260C	
160-16308-2	PZ-104-SD	Total/NA	Water	8260C	
160-16308-3	PZ-104-SS	Total/NA	Water	8260C	
160-16308-4	TRIPBLANK	Total/NA	Water	8260C	
160-16308-5	TRIPBLANK	Total/NA	Water	8260C	
LCS 160-239097/6	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-239097/7	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-239097/9	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 239802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-2 - DL	PZ-104-SD	Total/NA	Water	8260C	
160-16441-A-5 MS	Matrix Spike	Total/NA	Water	8260C	
160-16441-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 160-239802/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-239802/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-239802/7	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 239422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	3510C	
160-16308-1 - RA	PZ-105-SS	Total/NA	Water	3510C	
160-16308-2	PZ-104-SD	Total/NA	Water	3510C	
160-16308-2 - RA	PZ-104-SD	Total/NA	Water	3510C	
LCS 160-239422/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 160-239422/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-239422/1-A	Method Blank	Total/NA	Water	3510C	

Prep Batch: 239800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-3	PZ-104-SS	Total/NA	Water	3510C	
160-16308-3 - RA	PZ-104-SS	Total/NA	Water	3510C	
LCS 160-239800/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 160-239800/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-239800/1-A	Method Blank	Total/NA	Water	3510C	
MB 160-239800/1-A - RA	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 240637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-239422/2-A	Lab Control Sample	Total/NA	Water	8270D	239422
LCSD 160-239422/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	239422
MB 160-239422/1-A	Method Blank	Total/NA	Water	8270D	239422

Analysis Batch: 240800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	8270D	239422

GC/MS Semi VOA (Continued)

Analysis Batch: 240800 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-2	PZ-104-SD	Total/NA	Water	8270D	239422
160-16308-3	PZ-104-SS	Total/NA	Water	8270D	239800
LCS 160-239800/2-A	Lab Control Sample	Total/NA	Water	8270D	239800
LCSD 160-239800/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	239800
MB 160-239800/1-A	Method Blank	Total/NA	Water	8270D	239800

Analysis Batch: 242481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1 - RA	PZ-105-SS	Total/NA	Water	8270D	239422
160-16308-2 - RA	PZ-104-SD	Total/NA	Water	8270D	239422
160-16308-3 - RA	PZ-104-SS	Total/NA	Water	8270D	239800
MB 160-239800/1-A - RA	Method Blank	Total/NA	Water	8270D	239800

HPLC/IC

Analysis Batch: 241586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	300.0	
160-16308-1 - DL	PZ-105-SS	Total/NA	Water	300.0	
160-16308-2	PZ-104-SD	Total/NA	Water	300.0	
160-16308-2 - DL	PZ-104-SD	Total/NA	Water	300.0	
160-16308-3	PZ-104-SS	Total/NA	Water	300.0	
160-16308-3 - DL	PZ-104-SS	Total/NA	Water	300.0	
160-16445-J-1 DU	Duplicate	Total/NA	Water	300.0	
160-16445-J-1 DU - DL	Duplicate	Total/NA	Water	300.0	
160-16445-J-1 MS	Matrix Spike	Total/NA	Water	300.0	
160-16445-J-1 MS - DL	Matrix Spike	Total/NA	Water	300.0	
LCS 160-241586/10	Lab Control Sample	Total/NA	Water	300.0	
MB 160-241586/9	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 239794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	3010A	
160-16308-1 MS	PZ-105-SS	Total/NA	Water	3010A	
160-16308-1 MSD	PZ-105-SS	Total/NA	Water	3010A	
160-16308-2	PZ-104-SD	Total/NA	Water	3010A	
160-16308-3	PZ-104-SS	Total/NA	Water	3010A	
LCS 160-239794/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-239794/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 241336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	7470A	
160-16308-2	PZ-104-SD	Total/NA	Water	7470A	
160-16308-3	PZ-104-SS	Total/NA	Water	7470A	
160-16343-A-2-D MS	Matrix Spike	Total/NA	Water	7470A	
160-16343-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
LCS 160-241336/2-A	Lab Control Sample	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 241336 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-241336/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 241433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	7470A	241336
160-16308-2	PZ-104-SD	Total/NA	Water	7470A	241336
160-16308-3	PZ-104-SS	Total/NA	Water	7470A	241336
160-16343-A-2-D MS	Matrix Spike	Total/NA	Water	7470A	241336
160-16343-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	241336
LCS 160-241336/2-A	Lab Control Sample	Total/NA	Water	7470A	241336
MB 160-241336/1-A	Method Blank	Total/NA	Water	7470A	241336

Analysis Batch: 243457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	6010C	239794
160-16308-1 MS	PZ-105-SS	Total/NA	Water	6010C	239794
160-16308-1 MSD	PZ-105-SS	Total/NA	Water	6010C	239794
160-16308-2	PZ-104-SD	Total/NA	Water	6010C	239794
160-16308-3	PZ-104-SS	Total/NA	Water	6010C	239794
LCS 160-239794/2-A	Lab Control Sample	Total/NA	Water	6010C	239794
MB 160-239794/1-A	Method Blank	Total/NA	Water	6010C	239794

Analysis Batch: 244889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	6010C	239794
160-16308-1 MS	PZ-105-SS	Total/NA	Water	6010C	239794
160-16308-1 MSD	PZ-105-SS	Total/NA	Water	6010C	239794
160-16308-2	PZ-104-SD	Total/NA	Water	6010C	239794
160-16308-3	PZ-104-SS	Total/NA	Water	6010C	239794
LCS 160-239794/2-A	Lab Control Sample	Total/NA	Water	6010C	239794
MB 160-239794/1-A	Method Blank	Total/NA	Water	6010C	239794

General Chemistry

Analysis Batch: 239354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	160.1	
160-16308-1 DU	PZ-105-SS	Total/NA	Water	160.1	
160-16308-2 - DL	PZ-104-SD	Total/NA	Water	160.1	
160-16308-3	PZ-104-SS	Total/NA	Water	160.1	
LCS 160-239354/2	Lab Control Sample	Total/NA	Water	160.1	
MB 160-239354/1	Method Blank	Total/NA	Water	160.1	

Prep Batch: 239667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	410.4	
160-16308-1 DU	PZ-105-SS	Total/NA	Water	410.4	
160-16308-1 MS	PZ-105-SS	Total/NA	Water	410.4	
160-16308-2 - DL	PZ-104-SD	Total/NA	Water	410.4	
160-16308-3	PZ-104-SS	Total/NA	Water	410.4	

General Chemistry (Continued)

Prep Batch: 239667 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-239667/4-A	Lab Control Sample	Total/NA	Water	410.4	
MB 160-239667/3-A	Method Blank	Total/NA	Water	410.4	

Analysis Batch: 239798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	410.4	239667
160-16308-1 DU	PZ-105-SS	Total/NA	Water	410.4	239667
160-16308-1 MS	PZ-105-SS	Total/NA	Water	410.4	239667
160-16308-2 - DL	PZ-104-SD	Total/NA	Water	410.4	239667
160-16308-3	PZ-104-SS	Total/NA	Water	410.4	239667
LCS 160-239667/4-A	Lab Control Sample	Total/NA	Water	410.4	239667
MB 160-239667/3-A	Method Blank	Total/NA	Water	410.4	239667

Analysis Batch: 240661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	353.1 Preserved	
160-16308-1 DU	PZ-105-SS	Total/NA	Water	353.1 Preserved	
160-16308-1 MS	PZ-105-SS	Total/NA	Water	353.1 Preserved	
160-16308-2	PZ-104-SD	Total/NA	Water	353.1 Preserved	
160-16308-3	PZ-104-SS	Total/NA	Water	353.1 Preserved	
LCS 160-240661/16	Lab Control Sample	Total/NA	Water	353.1 Preserved	
MB 160-240661/15	Method Blank	Total/NA	Water	353.1 Preserved	

Analysis Batch: 242129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	415.1	
160-16308-1 DU	PZ-105-SS	Total/NA	Water	415.1	
160-16308-1 MS	PZ-105-SS	Total/NA	Water	415.1	
160-16308-2 - DL2	PZ-104-SD	Total/NA	Water	415.1	
160-16308-3	PZ-104-SS	Total/NA	Water	415.1	
LCS 160-242129/5	Lab Control Sample	Total/NA	Water	415.1	
MB 160-242129/4	Method Blank	Total/NA	Water	415.1	

Analysis Batch: 242745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	350.1	
160-16308-1 DU	PZ-105-SS	Total/NA	Water	350.1	
160-16308-1 MS	PZ-105-SS	Total/NA	Water	350.1	
LCS 160-242745/12	Lab Control Sample	Total/NA	Water	350.1	
MB 160-242745/11	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 242771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-2 - DL	PZ-104-SD	Total/NA	Water	350.1	
160-16308-3	PZ-104-SS	Total/NA	Water	350.1	
160-16344-D-1 DU	Duplicate	Total/NA	Water	350.1	
160-16344-D-1 MS	Matrix Spike	Total/NA	Water	350.1	
LCS 160-242771/13	Lab Control Sample	Total/NA	Water	350.1	
MB 160-242771/12	Method Blank	Total/NA	Water	350.1	

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Rad

Prep Batch: 239033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	PrecSep-21	
160-16308-2	PZ-104-SD	Total/NA	Water	PrecSep-21	
160-16308-3	PZ-104-SS	Total/NA	Water	PrecSep-21	
500-108175-Y-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	
500-108175-Z-2-A MS	Matrix Spike	Total/NA	Water	PrecSep-21	
LCS 160-239033/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-239033/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 239366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	PrecSep_0	
160-16308-2	PZ-104-SD	Total/NA	Water	PrecSep_0	
160-16308-3	PZ-104-SS	Total/NA	Water	PrecSep_0	
500-108175-Y-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	
500-108175-Z-2-B MS	Matrix Spike	Total/NA	Water	PrecSep_0	
LCS 160-239366/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-239366/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Filtration Batch: 239371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Dissolved	Water	Filtration	
160-16308-2	PZ-104-SD	Dissolved	Water	Filtration	

Prep Batch: 239583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Dissolved	Water	PrecSep-21	239371
160-16308-2	PZ-104-SD	Dissolved	Water	PrecSep-21	239371
LCS 160-239583/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-239583/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
MB 160-239583/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 239662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Dissolved	Water	PrecSep_0	239371
160-16308-2	PZ-104-SD	Dissolved	Water	PrecSep_0	239371
LCS 160-239662/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-239662/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
MB 160-239662/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 240784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	ExtChrom	
160-16308-1 DU	PZ-105-SS	Total/NA	Water	ExtChrom	
160-16308-2	PZ-104-SD	Total/NA	Water	ExtChrom	
160-16308-3	PZ-104-SS	Total/NA	Water	ExtChrom	
LCS 160-240784/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
MB 160-240784/1-A	Method Blank	Total/NA	Water	ExtChrom	

Prep Batch: 240794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	ExtChrom	

Rad (Continued)

Prep Batch: 240794 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1 DU	PZ-105-SS	Total/NA	Water	ExtChrom	
160-16308-2	PZ-104-SD	Total/NA	Water	ExtChrom	
160-16308-3	PZ-104-SS	Total/NA	Water	ExtChrom	
LCS 160-240794/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
MB 160-240794/1-A	Method Blank	Total/NA	Water	ExtChrom	

Prep Batch: 241366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-1	PZ-105-SS	Total/NA	Water	LSC_Dist_Susp	
160-16308-2	PZ-104-SD	Total/NA	Water	LSC_Dist_Susp	
160-16308-3	PZ-104-SS	Total/NA	Water	LSC_Dist_Susp	
160-16516-A-1-B DU	Duplicate	Total/NA	Water	LSC_Dist_Susp	
160-16516-A-2-B MS	Matrix Spike	Total/NA	Water	LSC_Dist_Susp	
LCS 160-241366/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
MB 160-241366/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	12DCE	TOL
Lab Sample ID	Client Sample ID	(71-139)	(80-121)	(76-121)	(80-129)
160-16308-1	PZ-105-SS	106	102	100	106
160-16308-1 MS	PZ-105-SS	96	103	98	102
160-16308-1 MSD	PZ-105-SS	98	102	99	103
160-16308-2	PZ-104-SD	104	99	98	103
160-16308-2 - DL	PZ-104-SD	92	99	96	96
160-16308-3	PZ-104-SS	105	101	100	102
160-16308-4	TRIPBLANK	104	104	101	104
160-16308-5	TRIPBLANK	104	101	99	101
160-16441-A-5 MS	Matrix Spike	95	105	105	97
160-16441-A-5 MSD	Matrix Spike Duplicate	94	101	102	96
LCS 160-239097/6	Lab Control Sample	101	104	101	102
LCS 160-239802/4	Lab Control Sample	92	98	93	96
LCSD 160-239097/7	Lab Control Sample Dup	100	103	101	103
LCSD 160-239802/5	Lab Control Sample Dup	91	97	93	94
MB 160-239097/9	Method Blank	107	102	99	104
MB 160-239802/7	Method Blank	97	92	93	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(43-108)	(15-59)	(50-101)	(10-50)	(21-97)	(37-120)
160-16308-1	PZ-105-SS	4 X	1 X	4 X	0.8 X	4 X	2 X
160-16308-2	PZ-104-SD	48	33	68	21	46	100
160-16308-3	PZ-104-SS	82	32	89	17	91	102
LCS 160-239422/2-A	Lab Control Sample	129 X	65 X	120 X	43	132 X	145 X
LCS 160-239800/2-A	Lab Control Sample	138 X	71 X	143 X	46	140 X	151 X
LCSD 160-239422/3-A	Lab Control Sample Dup	106	56	99	38	109 X	123 X
LCSD 160-239800/3-A	Lab Control Sample Dup	106	60 X	110 X	39	108 X	117
MB 160-239422/1-A	Method Blank	121 X	60 X	114 X	39	125 X	128 X
MB 160-239800/1-A	Method Blank	117 X	59	124 X	39	124 X	118

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Tracer/Carrier Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Ba (40-110)							
160-16308-1	PZ-105-SS	92.9							
160-16308-2	PZ-104-SD	95.2							
160-16308-3	PZ-104-SS	90.9							
500-108175-Y-2-B MSD	Matrix Spike Duplicate	77.5							
500-108175-Z-2-A MS	Matrix Spike	81.8							
LCS 160-239033/2-A	Lab Control Sample	104							
LCS 160-239583/2-A	Lab Control Sample	107							
LCSD 160-239583/3-A	Lab Control Sample Dup	103							
MB 160-239033/1-A	Method Blank	105							
MB 160-239583/1-A	Method Blank	103							

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Dissolved**

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Ba (40-110)							
160-16308-1	PZ-105-SS	95.7							
160-16308-2	PZ-104-SD	104							

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)						
160-16308-1	PZ-105-SS	92.9	84.5						
160-16308-2	PZ-104-SD	95.2	87.9						
160-16308-3	PZ-104-SS	90.9	81.5						
500-108175-Y-2-C MSD	Matrix Spike Duplicate	77.5	85.6						
500-108175-Z-2-B MS	Matrix Spike	81.8	82.6						
LCS 160-239366/2-A	Lab Control Sample	104	67.3						
LCS 160-239662/2-A	Lab Control Sample	107	80.7						
LCSD 160-239662/3-A	Lab Control Sample Dup	103	81.9						
MB 160-239366/1-A	Method Blank	105	83.4						
MB 160-239662/1-A	Method Blank	103	80.4						

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Tracer/Carrier Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16308-1

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Dissolved**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
160-16308-1	PZ-105-SS	95.7	83.4
160-16308-2	PZ-104-SD	104	83.7

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Th-229 (30-110)
160-16308-1	PZ-105-SS	83.4
160-16308-1 DU	PZ-105-SS	89.3
160-16308-2	PZ-104-SD	75.4
160-16308-3	PZ-104-SS	73.3
LCS 160-240784/2-A	Lab Control Sample	90.8
MB 160-240784/1-A	Method Blank	85.7

Tracer/Carrier Legend

Th-229 = Thorium-229

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-16308-1	PZ-105-SS	85.9
160-16308-1 DU	PZ-105-SS	81.8
160-16308-2	PZ-104-SD	89.3
160-16308-3	PZ-104-SS	91.7
LCS 160-240794/2-A	Lab Control Sample	85.2
MB 160-240794/1-A	Method Blank	87.3

Tracer/Carrier Legend

U-232 = Uranium-232

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 160-16355-1
Client Project/Site: Groundwater Samples

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 160-16355-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Missouri Attorney General's Office

Project: Groundwater Samples

Report Number: 160-16355-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica St. Louis attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 03/03/2016; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 12.0º C and 12.0º C.

RECEIPT EXCEPTIONS
The following samples were received with headspace in the sample vial: LCS-5A PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3), LCS-5A (160-16355-4), TRIP BLANK (160-16355-5) and TRIP BLANK (160-16355-6).

VOLATILE ORGANIC COMPOUNDS (GC MS)
Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3), LCS-5A (160-16355-4), TRIP BLANK (160-16355-5) and TRIP BLANK (160-16355-6) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 03/10/2016.

Analytical Batch: 239988
The continuing calibration verification (CCV) associated with batch 160-239988 recovered above the upper control limit for Methyl bromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.
(CCVIS 160-239988/3)

Job ID: 160-16355-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

The following compounds did not meet the minimum relative response factor limits in the continuing calibration verification (CCV) associated with batch 160-239988: Acetone and Methyl Ethyl Ketone. A low-level LOQV was analyzed at the reporting limit (5ug/L) and the affected analytes were detected. Target analytes recovering above the reporting limit will be qualified and reported. (CCVIS 160-239988/3)

According to the Chain of Custody samples LCS-5A (160-16355-4) were to be preserved with Hydrochloric acid. Upon preparation of the samples for analysis it was discovered that the pH was greater than 2. Due to the potential for loss of volatile analytes the pH is not checked upon arrival of the samples at the laboratory. The samples were analyzed within the 7 day hold time associated with unpreserved Volatiles samples in batch 160-239988.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC MS)

Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for semivolatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 03/07/2016 and analyzed on 03/15/2016 and 03/16/2016.

Analytical Batch: 240637

Famphur recovered outside initial calibration criteria at 102.6 % RSD. The ICV recovered low at 77.9 %D. The CCV recovered low at 74.2 %D. Hexachlorophene recovered outside the initial calibration at 56.4 % RSD. These compounds are poor responding compounds and will be estimated in the samples associated with this calibration. The data is reported with this narrative. PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3), LCS-5A (160-16355-4), (CCV 160-240637/4), (LCS 160-239422/2-A), (LCSD 160-239422/3-A) and (MB 160-239422/1-A)

Di-n-butyl phthalate was detected in method blank MB 160-239422/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 160-239422 and analytical batch 160-240637 recovered outside acceptance limits. The RPD failed between the LCS/LCSD. There was insufficient sample to perform a re-extraction; therefore, the data have been reported. (LCS 160-239422/2-A) and (LCSD 160-239422/3-A)

Surrogate recovery for the following samples and QC was outside of acceptance limits: LCS-5A (160-16355-4), (LCS 160-239422/2-A), (LCSD 160-239422/3-A) and (MB 160-239422/1-A). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Organic Prep

3510_8270_239422

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 160-239422. An LCS/LCSD has been provided.

Due to the matrix, the following samples could not be concentrated to the final method required volume: LCS-5A (160-16355-4). The reporting limits (RLs) are elevated proportionately.

The sample matrix was biphasic with methylene chloride layer on top, sample was taken to 10mL and layers were vigorously stirred with pipette. Prep analyst took the aliquot from the solvent layer.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 03/08/2016 and analyzed on 03/24/2016 and 04/07/2016.

Job ID: 160-16355-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

Prep Batch: 239605
Due to a difficult sample matrix, a dilution was performed for the following sample: LCS-5A (160-16355-4). These dilutions were prepared as follows: 25mL to 50mL

Analytical Batch: 242174
The low level check standard recovery associated with batch 160-242174 is outside the acceptance criteria for the following analyte(s): boron. The associated samples (method blank and LCS) are within their acceptable QC criteria indicating no adverse affect from the potential high bias. (CCVL 160-242174/18) and (CRI 160-242174/14)

The following samples were diluted to bring the concentration of target analytes within the calibration range: PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2) and LCS-5A (160-16355-4). Elevated reporting limits (RLs) are provided.

CaHard and Phosphorus were detected in method blank MB 160-239605/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Analytical Batch: 243457
The low level check standard recovery associated with batch 160-243457 is outside the acceptance criteria for the following analyte(s): boron. The CCVL bracketing the samples were within acceptable QC criteria therefore original results will be reported. (CRI 160-243457/20)

The following samples were diluted to bring the concentration of target analytes within the calibration range: PZ-202-SS (160-16355-1) and LCS-5A (160-16355-4). Elevated reporting limits (RLs) are provided.

The MS/MSD/serial dilution was analyzed on a different job within the prep batch. The sample chosen for batch QC had a different analyte list. As a result, the MS/MSD/serial dilution was not analyzed for boron. PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) Method performance is demonstrated by acceptable LCS recovery.

Analytical Batch: 244954
The following samples were diluted to bring the concentration of target analytes within the calibration range: PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2) and LCS-5A (160-16355-4). Elevated reporting limits (RLs) are provided.

The MS/MSD/serial dilution was analyzed on a different job within the prep batch. The sample chosen for batch QC had a different analyte list. As a result, the MS/MSD/serial dilution was not analyzed for boron. PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) Method performance is demonstrated by acceptable LCS recovery.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 03/16/2016 and analyzed on 03/17/2016.

Analytical Batch: 240812
Due to the nature of the sample, a dilution was required. LCS-5A (160-16355-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 03/08/2016.

Analytical Batch: 239473
The following samples in TDS batch 239473 were diluted to bring the concentration of target analytes within the calibration range: PZ-202-SS (160-16355-1) and LCS-5A (160-16355-4). Elevated reporting limits (RLs) are provided.

Job ID: 160-16355-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS, ION CHROMATOGRAPHY

Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for Anions, Ion Chromatography in accordance with EPA Method 300.0. The samples were analyzed on 03/15/2016 and 03/16/2016.

Analytical Batch: 240641

The following samples in Anion batch 160-240641 were diluted to bring the concentrations of target analytes within the calibration range: PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4). Elevated reporting limits (RLs) are provided.

The following sample in Anion batch 160-240641 was analyzed at dilution to start (2x), based on high sample conductivity which made undiluted analysis inadvisable: LCS-5A (160-16355-4). As a result, this sample is reported non-detect (ND) for Sulfate with an elevated reporting limit (RL).

The following matrix spike (MS) recovered outside control limits for Fluoride (123%) in Anion batch 160-240641: (160-16333-J-2 MS). Sample matrix interference is suspected, because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

AMMONIA

Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for ammonia in accordance with EPA Method 350.1. The samples were analyzed on 03/29/2016.

Analytical Batch: 242771

The following samples in Ammonia analytical batch 160-242771 were diluted to bring the concentrations of the target analyte within the calibration range: LCS-5A (160-16355-4). Elevated reporting limits (RLs) are provided.

The following matrix spike (MS) in Ammonia analytical batch 160-242771 recovered outside control limits, at 114% recovery: (160-16344-D-1 MS). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN, NITRATE-NITRITE

Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for Nitrogen, Nitrate-Nitrite in accordance with Method 353.1 Preserved. The samples were analyzed on 03/15/2016.

Analytical Batch: 240661

The matrix spike (MS) recoveries for the following samples in NO3-NO2 analytical batch 160-240661 were outside control limits: (160-16308-H-1 MS). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CHEMICAL OXYGEN DEMAND

Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for chemical oxygen demand in accordance with EPA Method 410.4. The samples were prepared and analyzed on 03/09/2016.

Analytical Batch: 239798

The following samples in COD batch 160-239798 were diluted to bring the concentration of target analytes within the calibration range: PZ-202-SS (160-16355-1) and LCS-5A (160-16355-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 160-16355-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

TOTAL ORGANIC CARBON
Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for total organic carbon in accordance with EPA Method 415.1. The samples were analyzed on 03/08/2016.

Analytical Batch: 239751
The following samples in TOC batch 160-239751 were diluted to bring the concentrations of the target analyte within the calibration range: PZ-202-SS (160-16355-1) and LCS-5A (160-16355-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 (GFPC)-DISSOLVED
Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were prepared on 03/08/2016 and analyzed on 03/30/2016.

Analytical Batch: 239583
The following samples were prepared at a reduced aliquot due to sediment and discoloration in the sample: PZ-202-SS (160-16355-1) and LCS-5A (160-16355-4).

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 (GFPC)
Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were prepared on 03/07/2016 and analyzed on 03/29/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228 (GFPC)-DISSOLVED
Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for Radium-228 (GFPC)-Dissolved in accordance with EPA 904. The samples were prepared on 03/09/2016 and analyzed on 03/23/2016.

Prep Batch: 239662
The detection goal for radium-228 was not met for the following samples due to a reduction of the sample size attributed to high residual mass: LCS-5A (160-16355-4). Analytical results are reported with the detection limit achieved.

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

The following samples were prepared at a reduced aliquot due to sediment and discoloration in the sample: PZ-202-SS (160-16355-1) and LCS-5A (160-16355-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228 (GFPC)
Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for Radium-228 (GFPC) in accordance with EPA 904. The samples were prepared on 03/08/2016 and analyzed on 03/23/2016.

Prep Batch: 239468
The detection goal was not met for the following sample due to a reduction of the sample size attributed to high residual mass: LCS-5A (160-16355-4). Analytical results are reported with the detection limit achieved.

Job ID: 160-16355-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

The following samples were prepared at a reduced aliquot due to sediment and discoloration: PZ-202-SS (160-16355-1) and LCS-5A (160-16355-4).

The following samples were prepared at a reduced aliquot due to sediment and discoloration: PZ-202-SS (160-16355-1) and LCS-5A (160-16355-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRITIUM, TOTAL (LSC)
Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for Tritium, Total (LSC) in accordance with USEPA 906.0. The samples were prepared on 03/25/2016 and analyzed on 03/27/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC THORIUM (ALPHA SPECTROMETRY)
Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for Isotopic Thorium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 03/16/2016 and analyzed on 03/24/2016.

Prep Batch: 240784
Samples are yellow and smell like sulfur. A reduced aliquot was used to prevent matrix interference. PZ-202-SS (160-16355-1) and LCS-5A (160-16355-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples PZ-202-SS (160-16355-1), PZ-201A-SS (160-16355-2), PZ-116-SS (160-16355-3) and LCS-5A (160-16355-4) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 03/16/2016 and analyzed on 03/23/2016.

Prep Batch: 240794
Samples are yellow and smell like sulfur. A reduced aliquot was used to prevent matrix interference. PZ-202-SS (160-16355-1) and LCS-5A (160-16355-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

Chain of Custody Record

testamerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: LYNN MILBERG	Lab PM: Lambert-Sykes, Chenise Y	Carrier Tracking No(s):	COC No: 160-3809-1856.1
Client Contact: Brenna McDonald	Phone: 573-453-4329	E-Mail: chenise.lambert-sykes@testamericainc.com		Page: Page 1 of 1
Company: Missouri Attorney General's Office				Job #:
Address: PO BOX 899	Due Date Requested:			
City: Jefferson City	TAT Requested (days):			
State, Zip: MO, 65102				
Phone: 573-368-2163(Tel)	PO #: Purchase Order not required			
Email: brenna.mcdonald@dnr.mo.gov	WO #:			
Project Name: Groundwater Samples	Project #: 16005117			
Site: Bridgeton Landfill	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1, 353.1_Pres, 410.4	160.1_Calcd, 300_ORGFM_28D	6010C, 7470A	415.1 - Total Organic Carbon	8260C - (MOD) OLM 4.2	8270D - (MOD) Appendix IX Semi-Volatiles	903.0, 904.0, A01R_Th, A01R_U	903.0, 904.0	906.0 - Tritium					Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	D	S	A	N	D	N	N						
PZ-202-SS	3/3/16	0855	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓						
PZ-201A-SS	3/3/16	1108	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓						
PZ-116-SS	3/3/16	1400	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
LCS-5A	3/3/16	1550	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					LEACHATE!
TripBlank	3/3/16	0800	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
Triplblank	3/3/16	0800	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
				Water																	
				Water																	

160-16355 Chain of Custody

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 3/3/2016 1645	Company MDNR	Received by:	Date/Time: 3/3/16 1645	Company TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-16355-1

Login Number: 16355
List Number: 1
Creator: McKinney, Gerrod E

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	The following sample was received with headspace in the sample vial: LCS-5A.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
E	Result exceeded calibration range.

HPLC/IC

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
G	The Sample MDC is greater than the requested RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SL
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SL
300.0	Anions, Ion Chromatography	MCAWW	TAL SL
6010C	Metals (ICP)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL SL
350.1	Nitrogen, Ammonia	MCAWW	TAL SL
353.1 Preserved	Nitrogen, Nitrate-Nitrite	MCAWW	TAL SL
410.4	COD	MCAWW	TAL SL
415.1	TOC	MCAWW	TAL SL
903.0	Radium-226 (GFPC)	EPA	TAL SL
904.0	Radium-228 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Thorium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL

Protocol References:

DOE = U.S. Department of Energy

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-16355-1	PZ-202-SS	Water	03/03/16 08:55	03/03/16 16:45
160-16355-2	PZ-201A-SS	Water	03/03/16 11:08	03/03/16 16:45
160-16355-3	PZ-116-SS	Water	03/03/16 14:00	03/03/16 16:45
160-16355-4	LCS-5A	Water	03/03/16 15:50	03/03/16 16:45
160-16355-5	TRIP BLANK	Water	03/03/16 08:00	03/03/16 16:45
160-16355-6	TRIP BLANK	Water	03/03/16 08:00	03/03/16 16:45

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-202-SS

Date Collected: 03/03/16 08:55
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 19:58	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 19:58	1
Acrolein	ND		50	3.1	ug/L			03/10/16 19:58	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 19:58	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 19:58	1
Benzene	**120**		5.0	0.25	ug/L			03/10/16 19:58	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 19:58	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 19:58	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 19:58	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 19:58	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 19:58	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 19:58	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 19:58	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 19:58	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 19:58	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 19:58	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 19:58	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 19:58	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 19:58	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 19:58	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 19:58	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 19:58	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 19:58	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 19:58	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 19:58	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 19:58	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 19:58	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 19:58	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 19:58	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 19:58	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 19:58	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 19:58	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 19:58	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 19:58	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 19:58	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 19:58	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 19:58	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 19:58	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 19:58	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 19:58	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 19:58	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 19:58	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 19:58	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 19:58	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 19:58	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 19:58	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 19:58	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 19:58	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 19:58	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-202-SS

Date Collected: 03/03/16 08:55
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	**2.7**	**J**	5.0	1.0	ug/L			03/10/16 19:58	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 19:58	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 19:58	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 19:58	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 19:58	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 19:58	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 19:58	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 19:58	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 19:58	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 19:58	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 19:58	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 19:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*71 - 139*		*03/10/16 19:58*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 121*		*03/10/16 19:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*76 - 121*		*03/10/16 19:58*	*1*
Toluene-d8 (Surr)	*102*		*80 - 129*		*03/10/16 19:58*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Acenaphthylene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Acetophenone	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2-Acetylaminofluorene	ND		94	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
4-Aminobiphenyl	ND		47	0.99	ug/L		03/07/16 16:12	03/15/16 22:57	1
Anthracene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Benzo[a]anthracene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Benzo[a]pyrene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Benzo[b]fluoranthene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Benzo[g,h,i]perylene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Benzo[k]fluoranthene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Benzyl alcohol	ND		9.4	2.8	ug/L		03/07/16 16:12	03/15/16 22:57	1
Bis(2-chloroethoxy)methane	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Bis(2-chloroethyl)ether	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
bis(2 chloro-1-methylethyl) ether	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Bis(2-ethylhexyl) phthalate	ND	*	9.4	1.8	ug/L		03/07/16 16:12	03/15/16 22:57	1
4-Bromophenyl phenyl ether	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Butyl benzyl phthalate	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
4-Chloroaniline	ND	*	9.4	1.9	ug/L		03/07/16 16:12	03/15/16 22:57	1
Chlorobenzilate	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
4-Chloro-3-methylphenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2-Chloronaphthalene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2-Chlorophenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
4-Chlorophenyl phenyl ether	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Chrysene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Diallate	ND		19	1.9	ug/L		03/07/16 16:12	03/15/16 22:57	1
Dibenz(a,h)anthracene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Dibenzofuran	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
3,3'-Dichlorobenzidine	ND	*	47	1.2	ug/L		03/07/16 16:12	03/15/16 22:57	1

Client Sample ID: PZ-202-SS

Date Collected: 03/03/16 08:55
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2,6-Dichlorophenol	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Diethyl phthalate	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Dimethoate	ND		19	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
3,3'-Dimethylbenzidine	ND		47	2.5	ug/L		03/07/16 16:12	03/15/16 22:57	1
2,4-Dimethylphenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Dimethyl phthalate	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Di-n-butyl phthalate	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
1,3-Dinitrobenzene	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
1,4-Dinitrobenzene	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
4,6-Dinitro-2-methylphenol	ND	*	9.4	1.2	ug/L		03/07/16 16:12	03/15/16 22:57	1
2,4-Dinitrophenol	ND		47	1.9	ug/L		03/07/16 16:12	03/15/16 22:57	1
2,4-Dinitrotoluene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2,6-Dinitrotoluene	ND	*	9.4	2.0	ug/L		03/07/16 16:12	03/15/16 22:57	1
Di-n-octyl phthalate	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Dinoseb	ND		19	1.9	ug/L		03/07/16 16:12	03/15/16 22:57	1
Diphenylamine	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Disulfoton	ND		47	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Ethyl methanesulfonate	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Famphur	ND		94	1.6	ug/L		03/07/16 16:12	03/15/16 22:57	1
Fluoranthene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Fluorene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Hexachlorobenzene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Hexachlorobutadiene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Hexachlorocyclopentadiene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Hexachloroethane	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Hexachlorophene	ND		240	9.4	ug/L		03/07/16 16:12	03/15/16 22:57	1
Hexachloropropene	ND		94	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Indeno[1,2,3-cd]pyrene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Isodrin	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Isophorone	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Isosafrole	ND		19	4.7	ug/L		03/07/16 16:12	03/15/16 22:57	1
Kepone	ND		94	19	ug/L		03/07/16 16:12	03/15/16 22:57	1
Methapyrilene	ND		47	1.2	ug/L		03/07/16 16:12	03/15/16 22:57	1
3-Methylcholanthrene	ND		19	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Methyl methanesulfonate	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2-Methylnaphthalene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Methyl parathion	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2-Methylphenol	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
3 & 4 Methylphenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/15/16 22:57	1
Naphthalene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
1,4-Naphthoquinone	ND		47	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
1-Naphthylamine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2-Naphthylamine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2-Nitroaniline	ND		9.4	1.0	ug/L		03/07/16 16:12	03/15/16 22:57	1
3-Nitroaniline	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
4-Nitroaniline	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Nitrobenzene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-202-SS

Date Collected: 03/03/16 08:55
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
5-Nitro-o-toluidine	ND		19	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2-Nitrophenol	ND	*	9.4	1.4	ug/L		03/07/16 16:12	03/15/16 22:57	1
4-Nitrophenol	ND		9.4	1.9	ug/L		03/07/16 16:12	03/15/16 22:57	1
N-Nitrosodiethylamine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
N-Nitrosodimethylamine	ND		9.4	1.9	ug/L		03/07/16 16:12	03/15/16 22:57	1
N-Nitrosodi-n-butylamine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
N-Nitrosodi-n-propylamine	ND	*	9.4	1.4	ug/L		03/07/16 16:12	03/15/16 22:57	1
N-Nitrosomethylethylamine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
N-Nitrosomorpholine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
N-Nitrosopiperidine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
N-Nitrosopyrrolidine	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
o,o',o''-Triethylphosphorothioate	ND		47	1.1	ug/L		03/07/16 16:12	03/15/16 22:57	1
o-Toluidine	ND		19	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Parathion	ND		47	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
p-Dimethylamino azobenzene	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Pentachlorobenzene	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Pentachloronitrobenzene	ND		47	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Pentachlorophenol	ND	*	47	1.2	ug/L		03/07/16 16:12	03/15/16 22:57	1
Phenacetin	ND		19	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Phenanthrene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Phenol	ND		9.4	1.9	ug/L		03/07/16 16:12	03/15/16 22:57	1
Phorate	ND		47	1.9	ug/L		03/07/16 16:12	03/15/16 22:57	1
p-Phenylene diamine	ND		94	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Pronamide	ND		19	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Pyrene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Safrole	ND		19	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
1,2,4,5-Tetrachlorobenzene	ND		9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2,3,4,6-Tetrachlorophenol	ND		47	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
Thionazin	ND		47	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
1,2,4-Trichlorobenzene	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2,4,5-Trichlorophenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
2,4,6-Trichlorophenol	ND	*	9.4	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1
1,3,5-Trinitrobenzene	ND		47	0.94	ug/L		03/07/16 16:12	03/15/16 22:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*98*		*43 - 108*	*03/07/16 16:12*	*03/15/16 22:57*	*1*
2-Fluorophenol (Surr)	*30*		*15 - 59*	*03/07/16 16:12*	*03/15/16 22:57*	*1*
Nitrobenzene-d5 (Surr)	*91*		*50 - 101*	*03/07/16 16:12*	*03/15/16 22:57*	*1*
Phenol-d5 (Surr)	*18*		*10 - 50*	*03/07/16 16:12*	*03/15/16 22:57*	*1*
Terphenyl-d14 (Surr)	*54*		*21 - 97*	*03/07/16 16:12*	*03/15/16 22:57*	*1*
2,4,6-Tribromophenol (Surr)	*104*		*37 - 120*	*03/07/16 16:12*	*03/15/16 22:57*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.14**		0.10	0.010	mg/L			03/15/16 23:56	1
Sulfate	**1.9**		0.50	0.050	mg/L			03/15/16 23:56	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1200**		80	8.0	mg/L			03/16/16 00:27	400

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-202-SS

Date Collected: 03/03/16 08:55
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-1

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		100	37	ug/L		03/08/16 14:46	03/24/16 15:32	10
Arsenic	**45**	**J**	100	18	ug/L		03/08/16 14:46	03/24/16 15:32	10
Barium	**2300**		500	21	ug/L		03/08/16 14:46	03/24/16 15:32	10
Beryllium	ND		50	2.8	ug/L		03/08/16 14:46	03/24/16 15:32	10
Boron	ND		1000	72	ug/L		03/08/16 14:46	04/07/16 14:52	10
Cadmium	ND		50	3.4	ug/L		03/08/16 14:46	03/24/16 15:32	10
CaHard	**1600000**	**B**	10000	540	ug/L		03/08/16 14:46	03/24/16 15:32	10
Calcium	**640000**		10000	540	ug/L		03/08/16 14:46	03/24/16 15:32	10
Chromium	ND		100	34	ug/L		03/08/16 14:46	03/24/16 15:32	10
Cobalt	**30**	**J**	500	27	ug/L		03/08/16 14:46	03/24/16 15:32	10
Copper	ND		250	21	ug/L		03/08/16 14:46	03/24/16 15:32	10
Iron	**76000**		1000	130	ug/L		03/08/16 14:46	03/24/16 15:32	10
Lead	**10**	**J**	100	6.0	ug/L		03/08/16 14:46	03/24/16 15:32	10
Magnesium	**270**		10	0.51	mg/L		03/08/16 14:46	03/24/16 15:32	10
Manganese	**2600**		150	10	ug/L		03/08/16 14:46	03/24/16 15:32	10
MgHard	**1100000**		10000	510	ug/L		03/08/16 14:46	03/24/16 15:32	10
Nickel	**0.079**	**J**	0.40	0.026	mg/L		03/08/16 14:46	03/24/16 15:32	10
Phosphorus	**180**	**J B**	2500	140	ug/L		03/08/16 14:46	03/24/16 15:32	10
Selenium	ND		150	21	ug/L		03/08/16 14:46	03/24/16 15:32	10
Silver	ND		200	9.9	ug/L		03/08/16 14:46	03/24/16 15:32	10
Sodium	**120000**		10000	1100	ug/L		03/08/16 14:46	03/24/16 15:32	10
Thallium	ND		200	24	ug/L		03/08/16 14:46	03/24/16 15:32	10
Total Hardness	**2700000**		50000	17000	ug/L		03/08/16 14:46	03/24/16 15:32	10
Vanadium	ND		500	44	ug/L		03/08/16 14:46	03/24/16 15:32	10
Zinc	ND		200	83	ug/L		03/08/16 14:46	03/24/16 15:32	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/16/16 13:53	03/17/16 09:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	**0.55**		0.050	0.0083	mg/L			03/29/16 15:13	1
Nitrate/Nitrite	ND		0.050	0.0047	mg/L			03/15/16 17:43	1

General Chemistry - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	**3700**		20	14	mg/L			03/08/16 10:41	4
Chemical Oxygen Demand	**660**		200	65	mg/L		03/09/16 09:08	03/09/16 13:45	10
Total Organic Carbon	**160**		50	36	mg/L			03/08/16 17:25	50

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.90**		0.316	0.410	1.00	0.141	pCi/L	03/07/16 13:43	03/29/16 08:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*03/07/16 13:43*	*03/29/16 08:39*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-202-SS

Date Collected: 03/03/16 08:55
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-1

Matrix: Water

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.13		0.277	0.338	1.00	0.175	pCi/L	03/08/16 12:46	03/30/16 07:56	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110	03/08/16 12:46	03/30/16 07:56	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.22		0.568	0.604	1.00	0.718	pCi/L	03/08/16 10:28	03/23/16 08:30	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110	03/08/16 10:28	03/23/16 08:30	1
Y Carrier	83.7		40 - 110	03/08/16 10:28	03/23/16 08:30	1

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.07		0.500	0.510	1.00	0.734	pCi/L	03/09/16 08:31	03/23/16 12:10	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110	03/09/16 08:31	03/23/16 12:10	1
Y Carrier	82.2		40 - 110	03/09/16 08:31	03/23/16 12:10	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	25000		1310	2560	500	416	pCi/L	03/25/16 10:51	03/27/16 22:04	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.918		0.497	0.503	1.00	0.509	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Thorium-229	77.3		30 - 110	03/16/16 09:50	03/24/16 18:20	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.423		0.299	0.301	1.00	0.272	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-235/236	0.000	U	0.0511	0.0511	1.00	0.184	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-238	0.0984	U	0.139	0.139	1.00	0.148	pCi/L	03/16/16 09:50	03/23/16 12:15	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	90.3		30 - 110	03/16/16 09:50	03/23/16 12:15	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-201A-SS

Date Collected: 03/03/16 11:08
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 20:23	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 20:23	1
Acrolein	ND		50	3.1	ug/L			03/10/16 20:23	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 20:23	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 20:23	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 20:23	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 20:23	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 20:23	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 20:23	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 20:23	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 20:23	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 20:23	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 20:23	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 20:23	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 20:23	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 20:23	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 20:23	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 20:23	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 20:23	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 20:23	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 20:23	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 20:23	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 20:23	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 20:23	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 20:23	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 20:23	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 20:23	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 20:23	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 20:23	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 20:23	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 20:23	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 20:23	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 20:23	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 20:23	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 20:23	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 20:23	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 20:23	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 20:23	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 20:23	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 20:23	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 20:23	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 20:23	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 20:23	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 20:23	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 20:23	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 20:23	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 20:23	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 20:23	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 20:23	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-201A-SS

Date Collected: 03/03/16 11:08
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		5.0	1.0	ug/L			03/10/16 20:23	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 20:23	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 20:23	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 20:23	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 20:23	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 20:23	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 20:23	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 20:23	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 20:23	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 20:23	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 20:23	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 20:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*71 - 139*		*03/10/16 20:23*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 121*		*03/10/16 20:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*76 - 121*		*03/10/16 20:23*	*1*
Toluene-d8 (Surr)	*100*		*80 - 129*		*03/10/16 20:23*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Acenaphthylene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Acetophenone	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2-Acetylaminofluorene	ND		95	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
4-Aminobiphenyl	ND		48	1.0	ug/L		03/07/16 16:12	03/15/16 23:30	1
Anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Benzo[a]anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Benzo[a]pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Benzo[b]fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Benzo[g,h,i]perylene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Benzo[k]fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Benzyl alcohol	ND		9.5	2.9	ug/L		03/07/16 16:12	03/15/16 23:30	1
Bis(2-chloroethoxy)methane	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Bis(2-chloroethyl)ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
bis(2 chloro-1-methylethyl) ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Bis(2-ethylhexyl) phthalate	ND	*	9.5	1.8	ug/L		03/07/16 16:12	03/15/16 23:30	1
4-Bromophenyl phenyl ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Butyl benzyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
4-Chloroaniline	ND	*	9.5	1.9	ug/L		03/07/16 16:12	03/15/16 23:30	1
Chlorobenzilate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
4-Chloro-3-methylphenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2-Chloronaphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2-Chlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
4-Chlorophenyl phenyl ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Chrysene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Diallate	ND		19	1.9	ug/L		03/07/16 16:12	03/15/16 23:30	1
Dibenz(a,h)anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Dibenzofuran	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
3,3'-Dichlorobenzidine	ND	*	48	1.2	ug/L		03/07/16 16:12	03/15/16 23:30	1

Client Sample ID: PZ-201A-SS

Date Collected: 03/03/16 11:08
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-2

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2,6-Dichlorophenol	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Diethyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Dimethoate	ND		19	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
3,3'-Dimethylbenzidine	ND		48	2.5	ug/L		03/07/16 16:12	03/15/16 23:30	1
2,4-Dimethylphenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Dimethyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Di-n-butyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
1,3-Dinitrobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
1,4-Dinitrobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
4,6-Dinitro-2-methylphenol	ND	*	9.5	1.2	ug/L		03/07/16 16:12	03/15/16 23:30	1
2,4-Dinitrophenol	ND		48	1.9	ug/L		03/07/16 16:12	03/15/16 23:30	1
2,4-Dinitrotoluene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2,6-Dinitrotoluene	ND	*	9.5	2.1	ug/L		03/07/16 16:12	03/15/16 23:30	1
Di-n-octyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Dinoseb	ND		19	1.9	ug/L		03/07/16 16:12	03/15/16 23:30	1
Diphenylamine	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Disulfoton	ND		48	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Ethyl methanesulfonate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Famphur	ND		95	1.6	ug/L		03/07/16 16:12	03/15/16 23:30	1
Fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Fluorene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Hexachlorobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Hexachlorobutadiene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Hexachlorocyclopentadiene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Hexachloroethane	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Hexachlorophene	ND		240	9.5	ug/L		03/07/16 16:12	03/15/16 23:30	1
Hexachloropropene	ND		95	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Indeno[1,2,3-cd]pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Isodrin	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Isophorone	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Isosafrole	ND		19	4.8	ug/L		03/07/16 16:12	03/15/16 23:30	1
Kepone	ND		95	19	ug/L		03/07/16 16:12	03/15/16 23:30	1
Methapyrilene	ND		48	1.2	ug/L		03/07/16 16:12	03/15/16 23:30	1
3-Methylcholanthrene	ND		19	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Methyl methanesulfonate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2-Methylnaphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Methyl parathion	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2-Methylphenol	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
3 & 4 Methylphenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/15/16 23:30	1
Naphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
1,4-Naphthoquinone	ND		48	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
1-Naphthylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2-Naphthylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2-Nitroaniline	ND		9.5	1.0	ug/L		03/07/16 16:12	03/15/16 23:30	1
3-Nitroaniline	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
4-Nitroaniline	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Nitrobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-201A-SS

Date Collected: 03/03/16 11:08
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-2

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
5-Nitro-o-toluidine	ND		19	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2-Nitrophenol	ND	*	9.5	1.4	ug/L		03/07/16 16:12	03/15/16 23:30	1
4-Nitrophenol	ND		9.5	1.9	ug/L		03/07/16 16:12	03/15/16 23:30	1
N-Nitrosodiethylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
N-Nitrosodimethylamine	ND		9.5	1.9	ug/L		03/07/16 16:12	03/15/16 23:30	1
N-Nitrosodi-n-butylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
N-Nitrosodi-n-propylamine	ND	*	9.5	1.4	ug/L		03/07/16 16:12	03/15/16 23:30	1
N-Nitrosomethylethylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
N-Nitrosomorpholine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
N-Nitrosopiperidine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
N-Nitrosopyrrolidine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
o,o',o''-Triethylphosphorothioate	ND		48	1.1	ug/L		03/07/16 16:12	03/15/16 23:30	1
o-Toluidine	ND		19	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Parathion	ND		48	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
p-Dimethylamino azobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Pentachlorobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Pentachloronitrobenzene	ND		48	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Pentachlorophenol	ND	*	48	1.2	ug/L		03/07/16 16:12	03/15/16 23:30	1
Phenacetin	ND		19	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Phenanthrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Phenol	ND		9.5	1.9	ug/L		03/07/16 16:12	03/15/16 23:30	1
Phorate	ND		48	1.9	ug/L		03/07/16 16:12	03/15/16 23:30	1
p-Phenylene diamine	ND		95	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Pronamide	ND		19	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Safrole	ND		19	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
1,2,4,5-Tetrachlorobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2,3,4,6-Tetrachlorophenol	ND		48	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
Thionazin	ND		48	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
1,2,4-Trichlorobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2,4,5-Trichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
2,4,6-Trichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1
1,3,5-Trinitrobenzene	ND		48	0.95	ug/L		03/07/16 16:12	03/15/16 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*92*		*43 - 108*	*03/07/16 16:12*	*03/15/16 23:30*	*1*
2-Fluorophenol (Surr)	*29*		*15 - 59*	*03/07/16 16:12*	*03/15/16 23:30*	*1*
Nitrobenzene-d5 (Surr)	*85*		*50 - 101*	*03/07/16 16:12*	*03/15/16 23:30*	*1*
Phenol-d5 (Surr)	*16*		*10 - 50*	*03/07/16 16:12*	*03/15/16 23:30*	*1*
Terphenyl-d14 (Surr)	*62*		*21 - 97*	*03/07/16 16:12*	*03/15/16 23:30*	*1*
2,4,6-Tribromophenol (Surr)	*97*		*37 - 120*	*03/07/16 16:12*	*03/15/16 23:30*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.36**		0.10	0.010	mg/L			03/16/16 00:43	1
Chloride	**4.3**		0.20	0.020	mg/L			03/16/16 00:43	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**61**		10	1.0	mg/L			03/16/16 00:59	20

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-201A-SS

Date Collected: 03/03/16 11:08
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-2

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		20	7.5	ug/L		03/08/16 14:46	03/24/16 15:37	2
Arsenic	ND		20	3.6	ug/L		03/08/16 14:46	03/24/16 15:37	2
Barium	**140**		100	4.2	ug/L		03/08/16 14:46	03/24/16 15:37	2
Beryllium	ND		10	0.57	ug/L		03/08/16 14:46	03/24/16 15:37	2
Boron	**32**	**J**	200	14	ug/L		03/08/16 14:46	04/07/16 14:56	2
Cadmium	ND		10	0.67	ug/L		03/08/16 14:46	03/24/16 15:37	2
CaHard	**280000**	**B**	2000	110	ug/L		03/08/16 14:46	03/24/16 15:37	2
Calcium	**110000**		2000	110	ug/L		03/08/16 14:46	03/24/16 15:37	2
Chromium	ND		20	6.7	ug/L		03/08/16 14:46	03/24/16 15:37	2
Cobalt	ND		100	5.4	ug/L		03/08/16 14:46	03/24/16 15:37	2
Copper	ND		50	4.2	ug/L		03/08/16 14:46	03/24/16 15:37	2
Iron	**140**	**J**	200	26	ug/L		03/08/16 14:46	03/24/16 15:37	2
Lead	ND		20	1.2	ug/L		03/08/16 14:46	03/24/16 15:37	2
Magnesium	**50**		2.0	0.10	mg/L		03/08/16 14:46	03/24/16 15:37	2
Manganese	**27**	**J**	30	2.0	ug/L		03/08/16 14:46	03/24/16 15:37	2
MgHard	**200000**		2000	100	ug/L		03/08/16 14:46	03/24/16 15:37	2
Nickel	ND		0.080	0.0051	mg/L		03/08/16 14:46	03/24/16 15:37	2
Phosphorus	ND		500	28	ug/L		03/08/16 14:46	03/24/16 15:37	2
Selenium	ND		30	4.2	ug/L		03/08/16 14:46	03/24/16 15:37	2
Silver	ND		40	2.0	ug/L		03/08/16 14:46	03/24/16 15:37	2
Sodium	**11000**		2000	210	ug/L		03/08/16 14:46	03/24/16 15:37	2
Thallium	ND		40	4.8	ug/L		03/08/16 14:46	03/24/16 15:37	2
Total Hardness	**480000**		10000	3500	ug/L		03/08/16 14:46	03/24/16 15:37	2
Vanadium	ND		100	8.8	ug/L		03/08/16 14:46	03/24/16 15:37	2
Zinc	**52**		40	17	ug/L		03/08/16 14:46	03/24/16 15:37	2

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/16/16 13:53	03/17/16 09:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	**480**		5.0	3.5	mg/L			03/08/16 10:41	1
Ammonia	**0.0085**	**J**	0.050	0.0083	mg/L			03/29/16 15:15	1
Nitrate/Nitrite	**0.36**		0.050	0.0047	mg/L			03/15/16 17:44	1
Chemical Oxygen Demand	ND		20	6.5	mg/L		03/09/16 09:08	03/09/16 13:45	1
Total Organic Carbon	ND		1.0	0.72	mg/L			03/08/16 17:36	1

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.255**		0.0810	0.0842	1.00	0.0913	pCi/L	03/07/16 13:43	03/29/16 08:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*03/07/16 13:43*	*03/29/16 08:39*	*1*

Client Sample ID: PZ-201A-SS

Lab Sample ID: 160-16355-2

Date Collected: 03/03/16 11:08

Matrix: Water

Date Received: 03/03/16 16:45

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.293		0.0798	0.0841	1.00	0.0759	pCi/L	03/08/16 12:46	03/30/16 07:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110	03/08/16 12:46	03/30/16 07:57	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.03		0.296	0.311	1.00	0.392	pCi/L	03/08/16 10:28	03/23/16 08:30	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110	03/08/16 10:28	03/23/16 08:30	1
Y Carrier	81.9		40 - 110	03/08/16 10:28	03/23/16 08:30	1

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.173	U	0.204	0.205	1.00	0.337	pCi/L	03/09/16 08:31	03/23/16 12:16	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110	03/09/16 08:31	03/23/16 12:16	1
Y Carrier	82.2		40 - 110	03/09/16 08:31	03/23/16 12:16	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-45.5	U	218	218	500	416	pCi/L	03/25/16 10:51	03/27/16 22:27	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.0909		0.0647	0.0652	1.00	0.0346	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Thorium-229	78.0		30 - 110	03/16/16 09:50	03/24/16 18:20	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	2.26		0.318	0.371	1.00	0.111	pCi/L	03/16/16 09:50	03/23/16 12:16	1
Uranium-235/236	0.0977		0.0788	0.0792	1.00	0.0896	pCi/L	03/16/16 09:50	03/23/16 12:16	1
Uranium-238	1.40		0.250	0.276	1.00	0.0946	pCi/L	03/16/16 09:50	03/23/16 12:16	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	82.5		30 - 110	03/16/16 09:50	03/23/16 12:16	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-116-SS

Date Collected: 03/03/16 14:00
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 20:49	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 20:49	1
Acrolein	ND		50	3.1	ug/L			03/10/16 20:49	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 20:49	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 20:49	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 20:49	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 20:49	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 20:49	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 20:49	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 20:49	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 20:49	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 20:49	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 20:49	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 20:49	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 20:49	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 20:49	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 20:49	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 20:49	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 20:49	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 20:49	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 20:49	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 20:49	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 20:49	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 20:49	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 20:49	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 20:49	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 20:49	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 20:49	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 20:49	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 20:49	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 20:49	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 20:49	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 20:49	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 20:49	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 20:49	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 20:49	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 20:49	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 20:49	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 20:49	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 20:49	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 20:49	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 20:49	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 20:49	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 20:49	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 20:49	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 20:49	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 20:49	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 20:49	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 20:49	1

Client Sample ID: PZ-116-SS

Date Collected: 03/03/16 14:00
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		5.0	1.0	ug/L			03/10/16 20:49	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 20:49	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 20:49	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 20:49	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 20:49	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 20:49	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 20:49	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 20:49	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 20:49	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 20:49	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 20:49	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 20:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*71 - 139*		*03/10/16 20:49*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 121*		*03/10/16 20:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*76 - 121*		*03/10/16 20:49*	*1*
Toluene-d8 (Surr)	*100*		*80 - 129*		*03/10/16 20:49*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Acenaphthylene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Acetophenone	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2-Acetylaminofluorene	ND		98	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
4-Aminobiphenyl	ND		49	1.0	ug/L		03/07/16 16:12	03/16/16 00:37	1
Anthracene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Benzo[a]anthracene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Benzo[a]pyrene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Benzo[b]fluoranthene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Benzo[g,h,i]perylene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Benzo[k]fluoranthene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Benzyl alcohol	ND		9.8	2.9	ug/L		03/07/16 16:12	03/16/16 00:37	1
Bis(2-chloroethoxy)methane	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Bis(2-chloroethyl)ether	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
bis(2 chloro-1-methylethyl) ether	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Bis(2-ethylhexyl) phthalate	ND	*	9.8	1.8	ug/L		03/07/16 16:12	03/16/16 00:37	1
4-Bromophenyl phenyl ether	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Butyl benzyl phthalate	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
4-Chloroaniline	ND	*	9.8	2.0	ug/L		03/07/16 16:12	03/16/16 00:37	1
Chlorobenzilate	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
4-Chloro-3-methylphenol	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2-Chloronaphthalene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2-Chlorophenol	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
4-Chlorophenyl phenyl ether	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Chrysene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Diallate	ND		20	2.0	ug/L		03/07/16 16:12	03/16/16 00:37	1
Dibenz(a,h)anthracene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Dibenzofuran	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
3,3'-Dichlorobenzidine	ND	*	49	1.3	ug/L		03/07/16 16:12	03/16/16 00:37	1

Client Sample ID: PZ-116-SS

Date Collected: 03/03/16 14:00
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2,6-Dichlorophenol	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Diethyl phthalate	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Dimethoate	ND		20	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
7,12-Dimethylbenz(a)anthracene	ND		20	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
3,3'-Dimethylbenzidine	ND		49	2.6	ug/L		03/07/16 16:12	03/16/16 00:37	1
2,4-Dimethylphenol	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Dimethyl phthalate	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Di-n-butyl phthalate	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
1,3-Dinitrobenzene	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
1,4-Dinitrobenzene	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
4,6-Dinitro-2-methylphenol	ND	*	9.8	1.2	ug/L		03/07/16 16:12	03/16/16 00:37	1
2,4-Dinitrophenol	ND		49	2.0	ug/L		03/07/16 16:12	03/16/16 00:37	1
2,4-Dinitrotoluene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2,6-Dinitrotoluene	ND	*	9.8	2.1	ug/L		03/07/16 16:12	03/16/16 00:37	1
Di-n-octyl phthalate	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Dinoseb	ND		20	2.0	ug/L		03/07/16 16:12	03/16/16 00:37	1
Diphenylamine	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Disulfoton	ND		49	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Ethyl methanesulfonate	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Famphur	ND		98	1.7	ug/L		03/07/16 16:12	03/16/16 00:37	1
Fluoranthene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Fluorene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Hexachlorobenzene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Hexachlorobutadiene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Hexachlorocyclopentadiene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Hexachloroethane	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Hexachlorophene	ND		250	9.8	ug/L		03/07/16 16:12	03/16/16 00:37	1
Hexachloropropene	ND		98	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Indeno[1,2,3-cd]pyrene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Isodrin	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Isophorone	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Isosafrole	ND		20	4.9	ug/L		03/07/16 16:12	03/16/16 00:37	1
Kepone	ND		98	20	ug/L		03/07/16 16:12	03/16/16 00:37	1
Methapyrilene	ND		49	1.2	ug/L		03/07/16 16:12	03/16/16 00:37	1
3-Methylcholanthrene	ND		20	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Methyl methanesulfonate	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2-Methylnaphthalene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Methyl parathion	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2-Methylphenol	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
3 & 4 Methylphenol	ND	*	20	2.0	ug/L		03/07/16 16:12	03/16/16 00:37	1
Naphthalene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
1,4-Naphthoquinone	ND		49	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
1-Naphthylamine	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2-Naphthylamine	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2-Nitroaniline	ND		9.8	1.1	ug/L		03/07/16 16:12	03/16/16 00:37	1
3-Nitroaniline	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
4-Nitroaniline	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Nitrobenzene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-116-SS

Date Collected: 03/03/16 14:00
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
5-Nitro-o-toluidine	ND		20	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2-Nitrophenol	ND	*	9.8	1.5	ug/L		03/07/16 16:12	03/16/16 00:37	1
4-Nitrophenol	ND		9.8	2.0	ug/L		03/07/16 16:12	03/16/16 00:37	1
N-Nitrosodiethylamine	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
N-Nitrosodimethylamine	ND		9.8	2.0	ug/L		03/07/16 16:12	03/16/16 00:37	1
N-Nitrosodi-n-butylamine	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
N-Nitrosodi-n-propylamine	ND	*	9.8	1.5	ug/L		03/07/16 16:12	03/16/16 00:37	1
N-Nitrosomethylethylamine	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
N-Nitrosomorpholine	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
N-Nitrosopiperidine	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
N-Nitrosopyrrolidine	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
o,o',o''-Triethylphosphorothioate	ND		49	1.1	ug/L		03/07/16 16:12	03/16/16 00:37	1
o-Toluidine	ND		20	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Parathion	ND		49	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
p-Dimethylamino azobenzene	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Pentachlorobenzene	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Pentachloronitrobenzene	ND		49	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Pentachlorophenol	ND	*	49	1.2	ug/L		03/07/16 16:12	03/16/16 00:37	1
Phenacetin	ND		20	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Phenanthrene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Phenol	ND		9.8	2.0	ug/L		03/07/16 16:12	03/16/16 00:37	1
Phorate	ND		49	2.0	ug/L		03/07/16 16:12	03/16/16 00:37	1
p-Phenylene diamine	ND		98	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Pronamide	ND		20	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Pyrene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Safrole	ND		20	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
1,2,4,5-Tetrachlorobenzene	ND		9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2,3,4,6-Tetrachlorophenol	ND		49	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
Thionazin	ND		49	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
1,2,4-Trichlorobenzene	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2,4,5-Trichlorophenol	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
2,4,6-Trichlorophenol	ND	*	9.8	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1
1,3,5-Trinitrobenzene	ND		49	0.98	ug/L		03/07/16 16:12	03/16/16 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*84*		*43 - 108*	*03/07/16 16:12*	*03/16/16 00:37*	*1*
2-Fluorophenol (Surr)	*27*		*15 - 59*	*03/07/16 16:12*	*03/16/16 00:37*	*1*
Nitrobenzene-d5 (Surr)	*78*		*50 - 101*	*03/07/16 16:12*	*03/16/16 00:37*	*1*
Phenol-d5 (Surr)	*15*		*10 - 50*	*03/07/16 16:12*	*03/16/16 00:37*	*1*
Terphenyl-d14 (Surr)	*59*		*21 - 97*	*03/07/16 16:12*	*03/16/16 00:37*	*1*
2,4,6-Tribromophenol (Surr)	*88*		*37 - 120*	*03/07/16 16:12*	*03/16/16 00:37*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.0**		0.20	0.020	mg/L			03/16/16 01:31	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**3.1**		2.0	0.20	mg/L			03/16/16 01:47	20
Sulfate	**34**		10	1.0	mg/L			03/16/16 01:47	20

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-116-SS

Date Collected: 03/03/16 14:00
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-3

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	3.7	ug/L		03/08/16 14:46	03/24/16 15:41	1
Arsenic	ND		10	1.8	ug/L		03/08/16 14:46	03/24/16 15:41	1
Barium	**78**		50	2.1	ug/L		03/08/16 14:46	03/24/16 15:41	1
Beryllium	ND		5.0	0.28	ug/L		03/08/16 14:46	03/24/16 15:41	1
Boron	**360**		100	7.2	ug/L		03/08/16 14:46	04/07/16 15:01	1
Cadmium	ND		5.0	0.34	ug/L		03/08/16 14:46	03/24/16 15:41	1
CaHard	**130000**	**B**	1000	54	ug/L		03/08/16 14:46	03/24/16 15:41	1
Calcium	**51000**		1000	54	ug/L		03/08/16 14:46	03/24/16 15:41	1
Chromium	ND		10	3.4	ug/L		03/08/16 14:46	03/24/16 15:41	1
Cobalt	ND		50	2.7	ug/L		03/08/16 14:46	03/24/16 15:41	1
Copper	ND		25	2.1	ug/L		03/08/16 14:46	03/24/16 15:41	1
Iron	**16**	**J**	100	13	ug/L		03/08/16 14:46	03/24/16 15:41	1
Lead	ND		10	0.60	ug/L		03/08/16 14:46	03/24/16 15:41	1
Magnesium	**35**		1.0	0.051	mg/L		03/08/16 14:46	03/24/16 15:41	1
Manganese	**13**	**J**	15	1.0	ug/L		03/08/16 14:46	03/24/16 15:41	1
MgHard	**140000**		1000	51	ug/L		03/08/16 14:46	03/24/16 15:41	1
Nickel	**0.0035**	**J**	0.040	0.0026	mg/L		03/08/16 14:46	03/24/16 15:41	1
Phosphorus	**160**	**J B**	250	14	ug/L		03/08/16 14:46	03/24/16 15:41	1
Selenium	ND		15	2.1	ug/L		03/08/16 14:46	03/24/16 15:41	1
Silver	ND		20	0.99	ug/L		03/08/16 14:46	03/24/16 15:41	1
Sodium	**44000**		1000	110	ug/L		03/08/16 14:46	03/24/16 15:41	1
Thallium	ND		20	2.4	ug/L		03/08/16 14:46	03/24/16 15:41	1
Total Hardness	**270000**		5000	1700	ug/L		03/08/16 14:46	03/24/16 15:41	1
Vanadium	ND		50	4.4	ug/L		03/08/16 14:46	03/24/16 15:41	1
Zinc	**10**	**J**	20	8.3	ug/L		03/08/16 14:46	03/24/16 15:41	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/16/16 13:53	03/17/16 09:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	**370**		5.0	3.5	mg/L			03/08/16 10:41	1
Ammonia	ND		0.050	0.0083	mg/L			03/29/16 16:51	1
Nitrate/Nitrite	**0.16**		0.050	0.0047	mg/L			03/15/16 17:45	1
Chemical Oxygen Demand	ND		20	6.5	mg/L		03/09/16 09:10	03/09/16 13:45	1
Total Organic Carbon	ND		1.0	0.72	mg/L			03/08/16 17:47	1

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.178**		0.0694	0.0712	1.00	0.0805	pCi/L	03/07/16 13:43	03/29/16 08:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*03/07/16 13:43*	*03/29/16 08:40*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: PZ-116-SS

Date Collected: 03/03/16 14:00
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-3

Matrix: Water

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.176		0.0641	0.0660	1.00	0.0679	pCi/L	03/08/16 12:46	03/30/16 07:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110	03/08/16 12:46	03/30/16 07:57	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.751		0.252	0.261	1.00	0.336	pCi/L	03/08/16 10:28	03/23/16 08:31	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110	03/08/16 10:28	03/23/16 08:31	1
Y Carrier	86.4		40 - 110	03/08/16 10:28	03/23/16 08:31	1

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0236	U	0.194	0.194	1.00	0.353	pCi/L	03/09/16 08:31	03/23/16 12:16	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110	03/09/16 08:31	03/23/16 12:16	1
Y Carrier	81.9		40 - 110	03/09/16 08:31	03/23/16 12:16	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-20.7	U	227	227	500	428	pCi/L	03/25/16 10:51	03/27/16 22:50	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.144		0.0830	0.0839	1.00	0.0632	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Thorium-229	75.5		30 - 110	03/16/16 09:50	03/24/16 18:20	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	5.63		0.479	0.673	1.00	0.0669	pCi/L	03/16/16 09:50	03/23/16 12:16	1
Uranium-235/236	0.0507		0.0507	0.0508	1.00	0.0380	pCi/L	03/16/16 09:50	03/23/16 12:16	1
Uranium-238	1.40		0.241	0.268	1.00	0.0818	pCi/L	03/16/16 09:50	03/23/16 12:16	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	84.7		30 - 110	03/16/16 09:50	03/23/16 12:16	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: LCS-5A

Date Collected: 03/03/16 15:50
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-4

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 21:14	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 21:14	1
Acrolein	ND		50	3.1	ug/L			03/10/16 21:14	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 21:14	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 21:14	1
Benzene	**63**		5.0	0.25	ug/L			03/10/16 21:14	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 21:14	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 21:14	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 21:14	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 21:14	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 21:14	1
Chlorobenzene	**82**		5.0	0.38	ug/L			03/10/16 21:14	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 21:14	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 21:14	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 21:14	1
cis-1,2-Dichloroethene	**1.1**	**J**	5.0	0.16	ug/L			03/10/16 21:14	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 21:14	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 21:14	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 21:14	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 21:14	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 21:14	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 21:14	1
1,4-Dichlorobenzene	**6.7**		5.0	0.35	ug/L			03/10/16 21:14	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 21:14	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 21:14	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 21:14	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 21:14	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 21:14	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 21:14	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 21:14	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 21:14	1
Ethylbenzene	**13**		5.0	0.30	ug/L			03/10/16 21:14	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 21:14	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 21:14	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 21:14	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 21:14	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 21:14	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 21:14	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 21:14	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 21:14	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 21:14	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 21:14	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 21:14	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 21:14	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 21:14	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 21:14	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 21:14	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 21:14	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 21:14	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: LCS-5A

Date Collected: 03/03/16 15:50
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-4

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	**6.3**		5.0	1.0	ug/L			03/10/16 21:14	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 21:14	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 21:14	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 21:14	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 21:14	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 21:14	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 21:14	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 21:14	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 21:14	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 21:14	1
Vinyl chloride	**1.2**	**J**	5.0	0.43	ug/L			03/10/16 21:14	1
Xylenes, Total	**31**		10	0.85	ug/L			03/10/16 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*71 - 139*		*03/10/16 21:14*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 121*		*03/10/16 21:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*76 - 121*		*03/10/16 21:14*	*1*
Toluene-d8 (Surr)	*96*		*80 - 129*		*03/10/16 21:14*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Acenaphthylene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Acetophenone	**2.3**	**J**	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2-Acetylaminofluorene	ND		190	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
4-Aminobiphenyl	ND		95	2.0	ug/L		03/07/16 16:12	03/16/16 00:04	1
Anthracene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Benzo[a]anthracene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Benzo[a]pyrene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Benzo[b]fluoranthene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Benzo[g,h,i]perylene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Benzo[k]fluoranthene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Benzyl alcohol	ND		19	5.7	ug/L		03/07/16 16:12	03/16/16 00:04	1
Bis(2-chloroethoxy)methane	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Bis(2-chloroethyl)ether	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
bis(2 chloro-1-methylethyl) ether	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Bis(2-ethylhexyl) phthalate	ND	*	19	3.5	ug/L		03/07/16 16:12	03/16/16 00:04	1
4-Bromophenyl phenyl ether	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Butyl benzyl phthalate	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
4-Chloroaniline	ND	*	19	3.8	ug/L		03/07/16 16:12	03/16/16 00:04	1
Chlorobenzilate	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
4-Chloro-3-methylphenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2-Chloronaphthalene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2-Chlorophenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
4-Chlorophenyl phenyl ether	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Chrysene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Diallate	ND		38	3.8	ug/L		03/07/16 16:12	03/16/16 00:04	1
Dibenz(a,h)anthracene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Dibenzofuran	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
3,3'-Dichlorobenzidine	ND	*	95	2.4	ug/L		03/07/16 16:12	03/16/16 00:04	1

Client Sample ID: LCS-5A

Date Collected: 03/03/16 15:50
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-4

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2,6-Dichlorophenol	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Diethyl phthalate	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Dimethoate	ND		38	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
7,12-Dimethylbenz(a)anthracene	ND		38	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
3,3'-Dimethylbenzidine	ND		95	5.0	ug/L		03/07/16 16:12	03/16/16 00:04	1
2,4-Dimethylphenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Dimethyl phthalate	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Di-n-butyl phthalate	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
1,3-Dinitrobenzene	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
1,4-Dinitrobenzene	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
4,6-Dinitro-2-methylphenol	ND	*	19	2.4	ug/L		03/07/16 16:12	03/16/16 00:04	1
2,4-Dinitrophenol	ND		95	3.8	ug/L		03/07/16 16:12	03/16/16 00:04	1
2,4-Dinitrotoluene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2,6-Dinitrotoluene	ND	*	19	4.1	ug/L		03/07/16 16:12	03/16/16 00:04	1
Di-n-octyl phthalate	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Dinoseb	ND		38	3.8	ug/L		03/07/16 16:12	03/16/16 00:04	1
Diphenylamine	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Disulfoton	ND		95	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Ethyl methanesulfonate	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Famphur	ND		190	3.2	ug/L		03/07/16 16:12	03/16/16 00:04	1
Fluoranthene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Fluorene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Hexachlorobenzene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Hexachlorobutadiene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Hexachlorocyclopentadiene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Hexachloroethane	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Hexachlorophene	ND		470	19	ug/L		03/07/16 16:12	03/16/16 00:04	1
Hexachloropropene	ND		190	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Indeno[1,2,3-cd]pyrene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Isodrin	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Isophorone	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Isosafrole	ND		38	9.5	ug/L		03/07/16 16:12	03/16/16 00:04	1
Kepone	ND		190	38	ug/L		03/07/16 16:12	03/16/16 00:04	1
Methapyrilene	ND		95	2.4	ug/L		03/07/16 16:12	03/16/16 00:04	1
3-Methylcholanthrene	ND		38	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Methyl methanesulfonate	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2-Methylnaphthalene	**9.0**	**J ***	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Methyl parathion	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2-Methylphenol	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
3 & 4 Methylphenol	**15**	**J ***	38	3.8	ug/L		03/07/16 16:12	03/16/16 00:04	1
Naphthalene	**35**	****	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
1,4-Naphthoquinone	ND		95	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
1-Naphthylamine	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2-Naphthylamine	**12**	**J**	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2-Nitroaniline	ND		19	2.1	ug/L		03/07/16 16:12	03/16/16 00:04	1
3-Nitroaniline	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
4-Nitroaniline	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Nitrobenzene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: LCS-5A

Date Collected: 03/03/16 15:50
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-4

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
5-Nitro-o-toluidine	ND		38	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2-Nitrophenol	ND	*	19	2.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
4-Nitrophenol	ND		19	3.8	ug/L		03/07/16 16:12	03/16/16 00:04	1
N-Nitrosodiethylamine	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
N-Nitrosodimethylamine	ND		19	3.8	ug/L		03/07/16 16:12	03/16/16 00:04	1
N-Nitrosodi-n-butylamine	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
N-Nitrosodi-n-propylamine	ND	*	19	2.8	ug/L		03/07/16 16:12	03/16/16 00:04	1
N-Nitrosomethylethylamine	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
N-Nitrosomorpholine	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
N-Nitrosopiperidine	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
N-Nitrosopyrrolidine	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
o,o',o''-Triethylphosphorothioate	ND		95	2.2	ug/L		03/07/16 16:12	03/16/16 00:04	1
o-Toluidine	ND		38	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Parathion	ND		95	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
p-Dimethylamino azobenzene	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Pentachlorobenzene	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Pentachloronitrobenzene	ND		95	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Pentachlorophenol	ND	*	95	2.4	ug/L		03/07/16 16:12	03/16/16 00:04	1
Phenacetin	ND		38	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Phenanthrene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Phenol	ND		19	3.8	ug/L		03/07/16 16:12	03/16/16 00:04	1
Phorate	ND		95	3.8	ug/L		03/07/16 16:12	03/16/16 00:04	1
p-Phenylene diamine	ND		190	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Pronamide	ND		38	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Pyrene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Safrole	ND		38	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
1,2,4,5-Tetrachlorobenzene	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2,3,4,6-Tetrachlorophenol	ND		95	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
Thionazin	ND		95	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
1,2,4-Trichlorobenzene	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2,4,5-Trichlorophenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
2,4,6-Trichlorophenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1
1,3,5-Trinitrobenzene	ND		95	1.9	ug/L		03/07/16 16:12	03/16/16 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*96*		*43 - 108*	*03/07/16 16:12*	*03/16/16 00:04*	*1*
2-Fluorophenol (Surr)	*38*		*15 - 59*	*03/07/16 16:12*	*03/16/16 00:04*	*1*
Nitrobenzene-d5 (Surr)	*102*	*X*	*50 - 101*	*03/07/16 16:12*	*03/16/16 00:04*	*1*
Phenol-d5 (Surr)	*33*		*10 - 50*	*03/07/16 16:12*	*03/16/16 00:04*	*1*
Terphenyl-d14 (Surr)	*47*		*21 - 97*	*03/07/16 16:12*	*03/16/16 00:04*	*1*
2,4,6-Tribromophenol (Surr)	*93*		*37 - 120*	*03/07/16 16:12*	*03/16/16 00:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.29**		0.20	0.020	mg/L			03/16/16 02:51	2
Sulfate	**0.66**	**J**	1.0	0.10	mg/L			03/16/16 02:51	2

Method: 300.0 - Anions, Ion Chromatography - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1400**		100	10	mg/L			03/16/16 03:23	500

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: LCS-5A

Date Collected: 03/03/16 15:50
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-4

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		200	75	ug/L		03/08/16 14:46	03/24/16 15:59	10
Arsenic	ND		200	36	ug/L		03/08/16 14:46	03/24/16 15:59	10
Barium	**1700**		1000	42	ug/L		03/08/16 14:46	03/24/16 15:59	10
Beryllium	ND		100	5.7	ug/L		03/08/16 14:46	03/24/16 15:59	10
Boron	**5300**		2000	140	ug/L		03/08/16 14:46	04/07/16 15:06	10
Cadmium	ND		100	6.7	ug/L		03/08/16 14:46	03/24/16 15:59	10
CaHard	**440000**	**B**	20000	1100	ug/L		03/08/16 14:46	03/24/16 15:59	10
Calcium	**180000**		20000	1100	ug/L		03/08/16 14:46	03/24/16 15:59	10
Chromium	ND		200	67	ug/L		03/08/16 14:46	03/24/16 15:59	10
Cobalt	ND		1000	54	ug/L		03/08/16 14:46	03/24/16 15:59	10
Copper	ND		500	42	ug/L		03/08/16 14:46	03/24/16 15:59	10
Iron	**7100**		2000	260	ug/L		03/08/16 14:46	03/24/16 15:59	10
Lead	ND		200	12	ug/L		03/08/16 14:46	03/24/16 15:59	10
Magnesium	**100**		20	1.0	mg/L		03/08/16 14:46	03/24/16 15:59	10
Manganese	**240**	**J**	300	20	ug/L		03/08/16 14:46	03/24/16 15:59	10
MgHard	**430000**		20000	1000	ug/L		03/08/16 14:46	03/24/16 15:59	10
Nickel	**0.062**	**J**	0.80	0.051	mg/L		03/08/16 14:46	03/24/16 15:59	10
Phosphorus	**1500**	**J B**	5000	280	ug/L		03/08/16 14:46	03/24/16 15:59	10
Selenium	ND		300	42	ug/L		03/08/16 14:46	03/24/16 15:59	10
Silver	**22**	**J**	400	20	ug/L		03/08/16 14:46	03/24/16 15:59	10
Sodium	**1000000**		20000	2100	ug/L		03/08/16 14:46	03/24/16 15:59	10
Thallium	ND		400	48	ug/L		03/08/16 14:46	03/24/16 15:59	10
Total Hardness	**860000**		100000	35000	ug/L		03/08/16 14:46	03/24/16 15:59	10
Vanadium	**92**	**J**	1000	88	ug/L		03/08/16 14:46	03/24/16 15:59	10
Zinc	**190**	**J**	400	170	ug/L		03/08/16 14:46	03/24/16 15:59	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.40	0.12	ug/L		03/16/16 13:53	03/17/16 09:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite	**0.0071**	**J**	0.050	0.0047	mg/L			03/15/16 17:49	1

General Chemistry - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	**3600**		50	35	mg/L			03/08/16 10:41	10
Chemical Oxygen Demand	**800**		200	65	mg/L		03/09/16 09:10	03/09/16 13:45	10
Total Organic Carbon	**200**		50	36	mg/L			03/08/16 18:00	50

General Chemistry - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	**300**		25	4.1	mg/L			03/29/16 16:53	500

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**6.29**		0.672	0.879	1.00	0.277	pCi/L	03/07/16 13:43	03/29/16 08:40	1

Client Sample ID: LCS-5A

Date Collected: 03/03/16 15:50
Date Received: 03/03/16 16:45

Lab Sample ID: 160-16355-4

Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110	03/07/16 13:43	03/29/16 08:40	1

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	7.45		0.770	1.02	1.00	0.342	pCi/L	03/08/16 12:46	03/30/16 07:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110	03/08/16 12:46	03/30/16 07:57	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.66	G	1.02	1.07	1.00	1.26	pCi/L	03/08/16 10:28	03/23/16 08:31	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110	03/08/16 10:28	03/23/16 08:31	1
Y Carrier	81.9		40 - 110	03/08/16 10:28	03/23/16 08:31	1

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.57	G	0.993	1.00	1.00	1.52	pCi/L	03/09/16 08:31	03/23/16 12:17	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110	03/09/16 08:31	03/23/16 12:17	1
Y Carrier	84.1		40 - 110	03/09/16 08:31	03/23/16 12:17	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	14200		1010	1600	500	425	pCi/L	03/25/16 10:51	03/27/16 23:13	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.921		0.528	0.533	1.00	0.457	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Thorium-229	65.6		30 - 110	03/16/16 09:50	03/24/16 18:20	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.169	U	0.223	0.223	1.00	0.351	pCi/L	03/16/16 09:50	03/23/16 12:16	1
Uranium-235/236	-0.0277	U	0.0554	0.0555	1.00	0.368	pCi/L	03/16/16 09:50	03/23/16 12:16	1

Client Sample ID: LCS-5A

Lab Sample ID: 160-16355-4
Date Collected: 03/03/16 15:50
Matrix: Water
Date Received: 03/03/16 16:45

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-238	0.138	U	0.190	0.190	1.00	0.295	pCi/L	03/16/16 09:50	03/23/16 12:16	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.0*		*30 - 110*	*03/16/16 09:50*	*03/23/16 12:16*	*1*

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-16355-5
Date Collected: 03/03/16 08:00
Matrix: Water
Date Received: 03/03/16 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 17:50	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 17:50	1
Acrolein	ND		50	3.1	ug/L			03/10/16 17:50	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 17:50	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 17:50	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 17:50	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 17:50	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 17:50	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 17:50	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 17:50	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 17:50	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 17:50	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 17:50	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 17:50	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 17:50	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 17:50	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 17:50	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 17:50	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 17:50	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 17:50	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 17:50	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 17:50	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 17:50	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 17:50	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 17:50	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 17:50	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 17:50	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 17:50	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 17:50	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 17:50	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 17:50	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 17:50	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 17:50	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 17:50	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 17:50	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 17:50	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 17:50	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-16355-5

Date Collected: 03/03/16 08:00
Matrix: Water
Date Received: 03/03/16 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl chloride	ND		10	0.55	ug/L			03/10/16 17:50	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 17:50	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 17:50	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 17:50	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 17:50	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 17:50	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 17:50	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 17:50	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 17:50	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 17:50	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 17:50	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 17:50	1
Toluene	ND		5.0	1.0	ug/L			03/10/16 17:50	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 17:50	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 17:50	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 17:50	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 17:50	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 17:50	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 17:50	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 17:50	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 17:50	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 17:50	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 17:50	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*71 - 139*		*03/10/16 17:50*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 121*		*03/10/16 17:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*76 - 121*		*03/10/16 17:50*	*1*
Toluene-d8 (Surr)	*100*		*80 - 129*		*03/10/16 17:50*	*1*

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-16355-6

Date Collected: 03/03/16 08:00
Matrix: Water
Date Received: 03/03/16 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 18:15	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 18:15	1
Acrolein	ND		50	3.1	ug/L			03/10/16 18:15	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 18:15	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 18:15	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 18:15	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 18:15	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 18:15	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 18:15	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 18:15	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 18:15	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 18:15	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 18:15	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-16355-6

Date Collected: 03/03/16 08:00

Matrix: Water

Date Received: 03/03/16 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		5.0	0.15	ug/L			03/10/16 18:15	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 18:15	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 18:15	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 18:15	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 18:15	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 18:15	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 18:15	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 18:15	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 18:15	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 18:15	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 18:15	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 18:15	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 18:15	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 18:15	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 18:15	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 18:15	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 18:15	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 18:15	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 18:15	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 18:15	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 18:15	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 18:15	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 18:15	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 18:15	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 18:15	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 18:15	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 18:15	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 18:15	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 18:15	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 18:15	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 18:15	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 18:15	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 18:15	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 18:15	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 18:15	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 18:15	1
Toluene	ND		5.0	1.0	ug/L			03/10/16 18:15	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 18:15	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 18:15	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 18:15	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 18:15	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 18:15	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 18:15	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 18:15	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 18:15	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 18:15	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 18:15	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 18:15	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-16355-6

Date Collected: 03/03/16 08:00

Matrix: Water

Date Received: 03/03/16 16:45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		71 - 139		03/10/16 18:15	1
Dibromofluoromethane (Surr)	101		80 - 121		03/10/16 18:15	1
1,2-Dichloroethane-d4 (Surr)	99		76 - 121		03/10/16 18:15	1
Toluene-d8 (Surr)	99		80 - 129		03/10/16 18:15	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 160-239988/7
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 17:24	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 17:24	1
Acrolein	ND		50	3.1	ug/L			03/10/16 17:24	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 17:24	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 17:24	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 17:24	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 17:24	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 17:24	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 17:24	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 17:24	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 17:24	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 17:24	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 17:24	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 17:24	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 17:24	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 17:24	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 17:24	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 17:24	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 17:24	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 17:24	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 17:24	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 17:24	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 17:24	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 17:24	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 17:24	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 17:24	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 17:24	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 17:24	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 17:24	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 17:24	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 17:24	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 17:24	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 17:24	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 17:24	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 17:24	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 17:24	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 17:24	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 17:24	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 17:24	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 17:24	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 17:24	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 17:24	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 17:24	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 17:24	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 17:24	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 17:24	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 17:24	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 17:24	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 160-239988/7
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 17:24	1
Toluene	ND		5.0	1.0	ug/L			03/10/16 17:24	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 17:24	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 17:24	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 17:24	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 17:24	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 17:24	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 17:24	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 17:24	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 17:24	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 17:24	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 17:24	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 17:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*71 - 139*		*03/10/16 17:24*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 121*		*03/10/16 17:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*76 - 121*		*03/10/16 17:24*	*1*
Toluene-d8 (Surr)	*98*		*80 - 129*		*03/10/16 17:24*	*1*

Lab Sample ID: LCS 160-239988/4
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	49.5		ug/L		99	63 - 131
Acetonitrile	500	438		ug/L		88	71 - 124
Acrolein	250	264		ug/L		106	45 - 140
Acrylonitrile	500	537		ug/L		107	81 - 117
Allyl chloride	50.0	52.2		ug/L		104	74 - 126
Benzene	50.0	50.1		ug/L		100	80 - 120
Bromochloromethane	50.0	51.1		ug/L		102	80 - 120
Bromodichloromethane	50.0	51.7		ug/L		103	80 - 120
Bromoform	50.0	53.8		ug/L		108	80 - 120
Carbon disulfide	50.0	53.4		ug/L		107	79 - 126
Carbon tetrachloride	50.0	50.8		ug/L		102	73 - 123
Chlorobenzene	50.0	48.8		ug/L		98	80 - 120
Chloroethane	50.0	50.6		ug/L		101	52 - 140
Chloroform	50.0	51.0		ug/L		102	80 - 120
Chloroprene	50.0	49.4		ug/L		99	80 - 120
cis-1,2-Dichloroethene	50.0	50.5		ug/L		101	80 - 120
cis-1,3-Dichloropropene	50.0	51.0		ug/L		102	80 - 122
Dibromochloromethane	50.0	52.3		ug/L		105	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	52.2		ug/L		104	77 - 125
1,2-Dibromoethane (EDB)	50.0	49.8		ug/L		100	80 - 120
1,2-Dichlorobenzene	50.0	48.2		ug/L		96	80 - 120
1,3-Dichlorobenzene	50.0	47.0		ug/L		94	80 - 120
1,4-Dichlorobenzene	50.0	48.2		ug/L		96	80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 160-239988/4
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	50.0	54.3		ug/L		109	62 - 140
1,1-Dichloroethane	50.0	50.2		ug/L		100	80 - 120
1,2-Dichloroethane	50.0	51.0		ug/L		102	69 - 124
1,1-Dichloroethene	50.0	52.0		ug/L		104	77 - 126
1,2-Dichloropropane	50.0	49.5		ug/L		99	80 - 120
1,3-Dichloropropane	50.0	50.2		ug/L		100	80 - 120
2,2-Dichloropropane	50.0	51.9		ug/L		104	69 - 130
1,1-Dichloropropene	50.0	49.9		ug/L		100	80 - 120
Ethylbenzene	50.0	49.5		ug/L		99	80 - 120
Ethyl methacrylate	50.0	56.9		ug/L		114	80 - 124
2-Hexanone	50.0	56.1		ug/L		112	64 - 136
Isobutyl alcohol	1250	1230		ug/L		99	54 - 140
Methacrylonitrile	500	517		ug/L		103	69 - 131
Methyl bromide	50.0	57.0		ug/L		114	57 - 139
Methyl chloride	50.0	51.0		ug/L		102	70 - 127
Methylene bromide	50.0	52.7		ug/L		105	78 - 120
Methylene Chloride	50.0	51.2		ug/L		102	80 - 120
Methyl Ethyl Ketone	50.0	57.5		ug/L		115	70 - 130
Methyl iodide	50.0	50.8		ug/L		102	73 - 125
Methyl methacrylate	100	107		ug/L		107	80 - 126
4-Methyl-2-pentanone (MIBK)	50.0	54.6		ug/L		109	76 - 129
Propionitrile	500	526		ug/L		105	78 - 120
Styrene	50.0	52.2		ug/L		104	80 - 120
1,1,1,2-Tetrachloroethane	50.0	50.2		ug/L		100	80 - 120
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/L		100	80 - 120
Tetrachloroethene	50.0	48.6		ug/L		97	80 - 120
Toluene	50.0	48.9		ug/L		98	80 - 120
trans-1,4-Dichloro-2-butene	50.0	54.4		ug/L		109	75 - 127
trans-1,2-Dichloroethene	50.0	50.4		ug/L		101	80 - 120
trans-1,3-Dichloropropene	50.0	52.0		ug/L		104	80 - 130
1,1,1-Trichloroethane	50.0	51.2		ug/L		102	76 - 120
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	80 - 120
Trichloroethene	50.0	48.5		ug/L		97	73 - 120
Trichlorofluoromethane	50.0	53.2		ug/L		106	74 - 130
1,2,3-Trichloropropane	50.0	53.1		ug/L		106	80 - 120
Vinyl acetate	50.0	58.9		ug/L		118	37 - 140
Vinyl chloride	50.0	49.7		ug/L		99	51 - 140
Xylenes, Total	100	98.0		ug/L		98	80 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*71 - 139*
Dibromofluoromethane (Surr)	*101*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*99*		*76 - 121*
Toluene-d8 (Surr)	*97*		*80 - 129*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 160-239988/5
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	47.6		ug/L		95	63 - 131	4	20
Acetonitrile	500	393		ug/L		79	71 - 124	11	20
Acrolein	250	242		ug/L		97	45 - 140	9	20
Acrylonitrile	500	496		ug/L		99	81 - 117	8	20
Allyl chloride	50.0	51.2		ug/L		102	74 - 126	2	20
Benzene	50.0	50.0		ug/L		100	80 - 120	0	20
Bromochloromethane	50.0	49.2		ug/L		98	80 - 120	4	20
Bromodichloromethane	50.0	52.0		ug/L		104	80 - 120	1	20
Bromoform	50.0	52.5		ug/L		105	80 - 120	3	20
Carbon disulfide	50.0	51.6		ug/L		103	79 - 126	3	20
Carbon tetrachloride	50.0	49.5		ug/L		99	73 - 123	3	20
Chlorobenzene	50.0	48.9		ug/L		98	80 - 120	0	20
Chloroethane	50.0	48.6		ug/L		97	52 - 140	4	20
Chloroform	50.0	50.5		ug/L		101	80 - 120	1	20
Chloroprene	50.0	49.2		ug/L		98	80 - 120	0	20
cis-1,2-Dichloroethene	50.0	49.9		ug/L		100	80 - 120	1	20
cis-1,3-Dichloropropene	50.0	51.6		ug/L		103	80 - 122	1	20
Dibromochloromethane	50.0	50.8		ug/L		102	80 - 120	3	20
1,2-Dibromo-3-Chloropropane	50.0	55.2		ug/L		110	77 - 125	6	20
1,2-Dibromoethane (EDB)	50.0	49.6		ug/L		99	80 - 120	0	20
1,2-Dichlorobenzene	50.0	47.7		ug/L		95	80 - 120	1	20
1,3-Dichlorobenzene	50.0	47.0		ug/L		94	80 - 120	0	20
1,4-Dichlorobenzene	50.0	48.0		ug/L		96	80 - 120	0	20
Dichlorodifluoromethane	50.0	50.3		ug/L		101	62 - 140	8	20
1,1-Dichloroethane	50.0	49.9		ug/L		100	80 - 120	1	20
1,2-Dichloroethane	50.0	50.9		ug/L		102	69 - 124	0	20
1,1-Dichloroethene	50.0	49.7		ug/L		99	77 - 126	4	20
1,2-Dichloropropane	50.0	50.2		ug/L		100	80 - 120	1	20
1,3-Dichloropropane	50.0	49.0		ug/L		98	80 - 120	2	20
2,2-Dichloropropane	50.0	49.8		ug/L		100	69 - 130	4	20
1,1-Dichloropropene	50.0	48.7		ug/L		97	80 - 120	2	20
Ethylbenzene	50.0	49.6		ug/L		99	80 - 120	0	20
Ethyl methacrylate	50.0	54.1		ug/L		108	80 - 124	5	20
2-Hexanone	50.0	52.7		ug/L		105	64 - 136	6	20
Isobutyl alcohol	1250	1110		ug/L		89	54 - 140	11	20
Methacrylonitrile	500	499		ug/L		100	69 - 131	3	20
Methyl bromide	50.0	53.6		ug/L		107	57 - 139	6	20
Methyl chloride	50.0	48.5		ug/L		97	70 - 127	5	20
Methylene bromide	50.0	50.9		ug/L		102	78 - 120	4	20
Methylene Chloride	50.0	50.0		ug/L		100	80 - 120	3	20
Methyl Ethyl Ketone	50.0	53.9		ug/L		108	70 - 130	6	20
Methyl iodide	50.0	49.4		ug/L		99	73 - 125	3	20
Methyl methacrylate	100	105		ug/L		105	80 - 126	1	20
4-Methyl-2-pentanone (MIBK)	50.0	52.1		ug/L		104	76 - 129	5	20
Propionitrile	500	507		ug/L		101	78 - 120	4	20
Styrene	50.0	52.4		ug/L		105	80 - 120	0	20
1,1,1,2-Tetrachloroethane	50.0	50.3		ug/L		101	80 - 120	0	20
1,1,2,2-Tetrachloroethane	50.0	48.7		ug/L		97	80 - 120	2	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 160-239988/5
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	50.0	47.2		ug/L		94	80 - 120	3	20
Toluene	50.0	48.5		ug/L		97	80 - 120	1	20
trans-1,4-Dichloro-2-butene	50.0	52.4		ug/L		105	75 - 127	4	20
trans-1,2-Dichloroethene	50.0	49.4		ug/L		99	80 - 120	2	20
trans-1,3-Dichloropropene	50.0	51.0		ug/L		102	80 - 130	2	20
1,1,1-Trichloroethane	50.0	49.9		ug/L		100	76 - 120	2	20
1,1,2-Trichloroethane	50.0	49.9		ug/L		100	80 - 120	2	20
Trichloroethene	50.0	48.4		ug/L		97	73 - 120	0	20
Trichlorofluoromethane	50.0	51.0		ug/L		102	74 - 130	4	20
1,2,3-Trichloropropane	50.0	49.7		ug/L		99	80 - 120	7	20
Vinyl acetate	50.0	50.1		ug/L		100	37 - 140	16	20
Vinyl chloride	50.0	48.3		ug/L		97	51 - 140	3	20
Xylenes, Total	100	96.9		ug/L		97	80 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*71 - 139*
Dibromofluoromethane (Surr)	*99*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*98*		*76 - 121*
Toluene-d8 (Surr)	*97*		*80 - 129*

Lab Sample ID: 160-16391-J-1 MS
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		50.0	50.7		ug/L		101	52 - 138
Acetonitrile	ND		500	490		ug/L		98	57 - 140
Acrolein	ND		250	257		ug/L		103	40 - 150
Acrylonitrile	ND		500	545		ug/L		109	58 - 142
Allyl chloride	ND		50.0	51.8		ug/L		104	74 - 124
Benzene	ND		50.0	50.6		ug/L		101	80 - 120
Bromochloromethane	ND		50.0	52.3		ug/L		105	72 - 125
Bromodichloromethane	ND		50.0	53.0		ug/L		106	71 - 128
Bromoform	ND		50.0	52.6		ug/L		105	65 - 133
Carbon disulfide	ND		50.0	52.7		ug/L		105	69 - 139
Carbon tetrachloride	ND		50.0	49.7		ug/L		99	70 - 126
Chlorobenzene	5.8		50.0	54.0		ug/L		96	80 - 120
Chloroethane	ND		50.0	53.1		ug/L		106	59 - 144
Chloroform	ND		50.0	52.0		ug/L		104	80 - 120
Chloroprene	ND		50.0	48.3		ug/L		97	77 - 121
cis-1,2-Dichloroethene	ND		50.0	51.4		ug/L		103	80 - 124
cis-1,3-Dichloropropene	ND		50.0	51.2		ug/L		102	67 - 130
Dibromochloromethane	ND		50.0	52.6		ug/L		105	68 - 133
1,2-Dibromo-3-Chloropropane	ND		50.0	55.1		ug/L		110	58 - 148
1,2-Dibromoethane (EDB)	ND		50.0	50.4		ug/L		101	65 - 138
1,2-Dichlorobenzene	ND		50.0	48.4		ug/L		97	80 - 124
1,3-Dichlorobenzene	ND		50.0	46.9		ug/L		94	80 - 120
1,4-Dichlorobenzene	0.70	J	50.0	48.4		ug/L		95	80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16391-J-1 MS
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	ND		50.0	51.7		ug/L		103	65 - 140
1,1-Dichloroethane	ND		50.0	51.0		ug/L		102	80 - 120
1,2-Dichloroethane	ND		50.0	52.4		ug/L		105	56 - 136
1,1-Dichloroethene	ND		50.0	49.9		ug/L		100	66 - 137
1,2-Dichloropropane	ND		50.0	50.5		ug/L		101	80 - 123
1,3-Dichloropropane	ND		50.0	50.8		ug/L		102	70 - 136
2,2-Dichloropropane	ND		50.0	50.1		ug/L		100	54 - 148
1,1-Dichloropropene	ND		50.0	50.4		ug/L		101	80 - 121
Ethylbenzene	ND		50.0	48.5		ug/L		97	80 - 121
Ethyl methacrylate	ND		50.0	55.3		ug/L		111	62 - 142
2-Hexanone	ND		50.0	51.2		ug/L		102	47 - 150
Isobutyl alcohol	ND		1250	1020		ug/L		82	48 - 150
Methacrylonitrile	ND		500	533		ug/L		107	54 - 149
Methyl bromide	ND		50.0	55.9		ug/L		112	53 - 146
Methyl chloride	ND		50.0	43.3		ug/L		87	61 - 137
Methylene bromide	ND		50.0	52.9		ug/L		106	61 - 136
Methylene Chloride	ND		50.0	51.8		ug/L		104	80 - 120
Methyl Ethyl Ketone	ND		50.0	55.4		ug/L		111	58 - 143
Methyl iodide	ND		50.0	51.8		ug/L		104	69 - 124
Methyl methacrylate	ND		100	105		ug/L		105	56 - 150
4-Methyl-2-pentanone (MIBK)	ND		50.0	54.5		ug/L		109	53 - 150
Propionitrile	ND		500	538		ug/L		108	57 - 142
Styrene	ND		50.0	52.2		ug/L		104	44 - 150
1,1,1,2-Tetrachloroethane	ND		50.0	50.2		ug/L		100	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	49.8		ug/L		100	60 - 150
Tetrachloroethene	ND		50.0	47.2		ug/L		94	66 - 132
Toluene	ND		50.0	48.1		ug/L		96	75 - 134
trans-1,4-Dichloro-2-butene	ND		50.0	50.2		ug/L		100	55 - 146
trans-1,2-Dichloroethene	ND		50.0	49.3		ug/L		99	79 - 121
trans-1,3-Dichloropropene	ND		50.0	50.8		ug/L		102	68 - 143
1,1,1-Trichloroethane	ND		50.0	50.8		ug/L		102	74 - 123
1,1,2-Trichloroethane	ND		50.0	54.6		ug/L		109	70 - 134
Trichloroethene	ND		50.0	48.0		ug/L		96	63 - 120
Trichlorofluoromethane	ND		50.0	51.2		ug/L		102	53 - 150
1,2,3-Trichloropropane	ND		50.0	49.4		ug/L		99	62 - 137
Vinyl acetate	ND		50.0	56.6		ug/L		113	63 - 150
Vinyl chloride	ND		50.0	48.0		ug/L		96	54 - 140
Xylenes, Total	ND		100	97.9		ug/L		98	80 - 124

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*71 - 139*
Dibromofluoromethane (Surr)	*103*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*105*		*76 - 121*
Toluene-d8 (Surr)	*97*		*80 - 129*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16391-J-1 MSD
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		50.0	52.8		ug/L		106	52 - 138	4	20
Acetonitrile	ND		500	556		ug/L		111	57 - 140	13	20
Acrolein	ND		250	264		ug/L		106	40 - 150	3	20
Acrylonitrile	ND		500	580		ug/L		116	58 - 142	6	20
Allyl chloride	ND		50.0	54.0		ug/L		108	74 - 124	4	20
Benzene	ND		50.0	51.5		ug/L		103	80 - 120	2	20
Bromochloromethane	ND		50.0	53.6		ug/L		107	72 - 125	2	20
Bromodichloromethane	ND		50.0	54.9		ug/L		110	71 - 128	3	20
Bromoform	ND		50.0	54.4		ug/L		109	65 - 133	4	20
Carbon disulfide	ND		50.0	53.4		ug/L		107	69 - 139	1	20
Carbon tetrachloride	ND		50.0	51.0		ug/L		102	70 - 126	2	20
Chlorobenzene	5.8		50.0	54.2		ug/L		97	80 - 120	0	20
Chloroethane	ND		50.0	54.1		ug/L		108	59 - 144	2	20
Chloroform	ND		50.0	52.7		ug/L		105	80 - 120	1	20
Chloroprene	ND		50.0	49.0		ug/L		98	77 - 121	2	20
cis-1,2-Dichloroethene	ND		50.0	51.0		ug/L		102	80 - 124	1	20
cis-1,3-Dichloropropene	ND		50.0	53.2		ug/L		106	67 - 130	4	20
Dibromochloromethane	ND		50.0	52.3		ug/L		105	68 - 133	1	20
1,2-Dibromo-3-Chloropropane	ND		50.0	53.0		ug/L		106	58 - 148	4	20
1,2-Dibromoethane (EDB)	ND		50.0	53.0		ug/L		106	65 - 138	5	20
1,2-Dichlorobenzene	ND		50.0	47.9		ug/L		96	80 - 124	1	20
1,3-Dichlorobenzene	ND		50.0	46.5		ug/L		93	80 - 120	1	20
1,4-Dichlorobenzene	0.70	J	50.0	48.6		ug/L		96	80 - 120	0	20
Dichlorodifluoromethane	ND		50.0	51.9		ug/L		104	65 - 140	0	20
1,1-Dichloroethane	ND		50.0	52.1		ug/L		104	80 - 120	2	20
1,2-Dichloroethane	ND		50.0	55.0		ug/L		110	56 - 136	5	20
1,1-Dichloroethene	ND		50.0	50.5		ug/L		101	66 - 137	1	20
1,2-Dichloropropane	ND		50.0	52.7		ug/L		105	80 - 123	4	20
1,3-Dichloropropane	ND		50.0	51.4		ug/L		103	70 - 136	1	20
2,2-Dichloropropane	ND		50.0	49.1		ug/L		98	54 - 148	2	20
1,1-Dichloropropene	ND		50.0	51.5		ug/L		103	80 - 121	2	20
Ethylbenzene	ND		50.0	48.4		ug/L		97	80 - 121	0	20
Ethyl methacrylate	ND		50.0	58.7		ug/L		117	62 - 142	6	20
2-Hexanone	ND		50.0	56.7		ug/L		113	47 - 150	10	20
Isobutyl alcohol	ND		1250	1140		ug/L		91	48 - 150	11	20
Methacrylonitrile	ND		500	571		ug/L		114	54 - 149	7	20
Methyl bromide	ND		50.0	54.4		ug/L		109	53 - 146	3	20
Methyl chloride	ND		50.0	44.0		ug/L		88	61 - 137	2	20
Methylene bromide	ND		50.0	55.9		ug/L		112	61 - 136	6	20
Methylene Chloride	ND		50.0	52.4		ug/L		105	80 - 120	1	20
Methyl Ethyl Ketone	ND		50.0	61.3		ug/L		123	58 - 143	10	20
Methyl iodide	ND		50.0	51.8		ug/L		104	69 - 124	0	20
Methyl methacrylate	ND		100	113		ug/L		113	56 - 150	7	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	56.5		ug/L		113	53 - 150	4	20
Propionitrile	ND		500	587		ug/L		117	57 - 142	9	20
Styrene	ND		50.0	51.4		ug/L		103	44 - 150	2	20
1,1,1,2-Tetrachloroethane	ND		50.0	50.6		ug/L		101	80 - 120	1	20
1,1,2,2-Tetrachloroethane	ND		50.0	51.5		ug/L		103	60 - 150	3	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16391-J-1 MSD
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	ND		50.0	46.3		ug/L		93	66 - 132	2	20
Toluene	ND		50.0	48.1		ug/L		96	75 - 134	0	20
trans-1,4-Dichloro-2-butene	ND		50.0	52.2		ug/L		104	55 - 146	4	20
trans-1,2-Dichloroethene	ND		50.0	50.5		ug/L		101	79 - 121	2	20
trans-1,3-Dichloropropene	ND		50.0	52.6		ug/L		105	68 - 143	3	20
1,1,1-Trichloroethane	ND		50.0	51.7		ug/L		103	74 - 123	2	20
1,1,2-Trichloroethane	ND		50.0	56.6		ug/L		113	70 - 134	4	20
Trichloroethene	ND		50.0	49.5		ug/L		99	63 - 120	3	20
Trichlorofluoromethane	ND		50.0	52.1		ug/L		104	53 - 150	2	20
1,2,3-Trichloropropane	ND		50.0	51.7		ug/L		103	62 - 137	5	20
Vinyl acetate	ND		50.0	59.9		ug/L		120	63 - 150	6	20
Vinyl chloride	ND		50.0	49.6		ug/L		99	54 - 140	3	20
Xylenes, Total	ND		100	95.6		ug/L		96	80 - 124	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*71 - 139*
Dibromofluoromethane (Surr)	*104*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*108*		*76 - 121*
Toluene-d8 (Surr)	*95*		*80 - 129*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 160-239422/1-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239422

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Acenaphthylene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Acetophenone	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Acetylaminofluorene	ND		100	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Aminobiphenyl	ND		50	1.1	ug/L		03/07/16 16:12	03/15/16 17:56	1
Anthracene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[a]anthracene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[a]pyrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[b]fluoranthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[g,h,i]perylene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[k]fluoranthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzyl alcohol	ND		10	3.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Bis(2-chloroethoxy)methane	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Bis(2-chloroethyl)ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
bis(2 chloro-1-methylethyl) ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Bis(2-ethylhexyl) phthalate	ND		10	1.9	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Bromophenyl phenyl ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Butyl benzyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Chloroaniline	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Chlorobenzilate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Chloro-3-methylphenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-239422/1-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239422

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Chlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Chlorophenyl phenyl ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Chrysene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Diallate	ND		20	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dibenz(a,h)anthracene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dibenzofuran	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
3,3'-Dichlorobenzidine	ND		50	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,6-Dichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Diethyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dimethoate	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
7,12-Dimethylbenz(a)anthracene	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
3,3'-Dimethylbenzidine	ND		50	2.6	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dimethylphenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dimethyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Di-n-butyl phthalate	1.18	J	10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,3-Dinitrobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,4-Dinitrobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4,6-Dinitro-2-methylphenol	ND		10	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dinitrophenol	ND		50	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dinitrotoluene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,6-Dinitrotoluene	ND		10	2.2	ug/L		03/07/16 16:12	03/15/16 17:56	1
Di-n-octyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dinoseb	ND		20	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Diphenylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Disulfoton	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Ethyl methanesulfonate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Famphur	ND		100	1.7	ug/L		03/07/16 16:12	03/15/16 17:56	1
Fluoranthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Fluorene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorobutadiene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachloroethane	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorophene	ND		250	10	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachloropropene	ND		100	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Indeno[1,2,3-cd]pyrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Isodrin	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Isophorone	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Isosafrole	ND		20	5.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Kepone	ND		100	20	ug/L		03/07/16 16:12	03/15/16 17:56	1
Methapyrilene	ND		50	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1
3-Methylcholanthrene	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Methyl methanesulfonate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Methylnaphthalene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Methyl parathion	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Methylphenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-239422/1-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239422

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	ND		20	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Naphthalene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,4-Naphthoquinone	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1-Naphthylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Naphthylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Nitroaniline	ND		10	1.1	ug/L		03/07/16 16:12	03/15/16 17:56	1
3-Nitroaniline	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Nitroaniline	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Nitrobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
5-Nitro-o-toluidine	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Nitrophenol	ND		10	1.5	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Nitrophenol	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodiethylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodimethylamine	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodi-n-butylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosomethylethylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosomorpholine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosopiperidine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosopyrrolidine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
o,o',o''-Triethylphosphorothioate	ND		50	1.1	ug/L		03/07/16 16:12	03/15/16 17:56	1
o-Toluidine	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Parathion	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
p-Dimethylamino azobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pentachlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pentachloronitrobenzene	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pentachlorophenol	ND		50	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1
Phenacetin	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Phenanthrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Phenol	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Phorate	ND		50	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
p-Phenylene diamine	ND		100	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pronamide	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pyrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Safrole	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,3,4,6-Tetrachlorophenol	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Thionazin	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,2,4-Trichlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4,5-Trichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4,6-Trichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,3,5-Trinitrobenzene	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*121*	*X*	*43 - 108*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
2-Fluorophenol (Surr)	*60*	*X*	*15 - 59*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
Nitrobenzene-d5 (Surr)	*114*	*X*	*50 - 101*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
Phenol-d5 (Surr)	*39*		*10 - 50*	*03/07/16 16:12*	*03/15/16 17:56*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-239422/1-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239422

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*125*	*X*	*21 - 97*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
2,4,6-Tribromophenol (Surr)	*128*	*X*	*37 - 120*	*03/07/16 16:12*	*03/15/16 17:56*	*1*

Lab Sample ID: LCS 160-239422/2-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239422

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	200	258	*	ug/L		129	58 - 108
Acenaphthylene	200	251	*	ug/L		126	59 - 110
Anthracene	200	265	*	ug/L		132	59 - 106
Benzo[a]anthracene	200	269	*	ug/L		135	56 - 105
Benzo[a]pyrene	200	374	E *	ug/L		187	54 - 109
Benzo[b]fluoranthene	200	397	E *	ug/L		198	58 - 109
Benzo[g,h,i]perylene	200	338	E *	ug/L		169	50 - 119
Benzo[k]fluoranthene	200	382	E *	ug/L		191	54 - 109
Bis(2-chloroethoxy)methane	200	258	*	ug/L		129	59 - 110
Bis(2-chloroethyl)ether	200	254	*	ug/L		127	58 - 109
bis(2 chloro-1-methylethyl) ether	200	216	*	ug/L		108	49 - 97
Bis(2-ethylhexyl) phthalate	200	285	*	ug/L		142	58 - 111
4-Bromophenyl phenyl ether	200	275	*	ug/L		137	62 - 98
Butyl benzyl phthalate	200	274	*	ug/L		137	56 - 111
4-Chloroaniline	200	203	*	ug/L		102	43 - 97
4-Chloro-3-methylphenol	200	230	*	ug/L		115	51 - 102
2-Chloronaphthalene	200	258	*	ug/L		129	58 - 109
2-Chlorophenol	200	224	*	ug/L		112	47 - 97
4-Chlorophenyl phenyl ether	200	270	*	ug/L		135	59 - 110
Chrysene	200	277	*	ug/L		139	55 - 107
Dibenz(a,h)anthracene	200	360	E *	ug/L		180	52 - 118
Dibenzofuran	200	254	*	ug/L		127	57 - 106
3,3'-Dichlorobenzidine	200	240	*	ug/L		120	50 - 105
2,4-Dichlorophenol	200	248	*	ug/L		124	55 - 104
Diethyl phthalate	200	258	*	ug/L		129	58 - 113
2,4-Dimethylphenol	200	216	*	ug/L		108	53 - 99
Dimethyl phthalate	200	261	*	ug/L		131	60 - 114
Di-n-butyl phthalate	200	258	*	ug/L		129	60 - 105
4,6-Dinitro-2-methylphenol	200	271	*	ug/L		135	56 - 118
2,4-Dinitrophenol	200	199		ug/L		100	53 - 119
2,4-Dinitrotoluene	200	268	*	ug/L		134	57 - 117
2,6-Dinitrotoluene	200	265	*	ug/L		132	59 - 117
Di-n-octyl phthalate	200	285	*	ug/L		143	59 - 113
Diphenylamine	200	254	*	ug/L		127	58 - 102
Fluoranthene	200	264	*	ug/L		132	56 - 113
Fluorene	200	269	*	ug/L		135	61 - 113
Hexachlorobenzene	200	266	*	ug/L		133	57 - 113
Hexachlorobutadiene	200	236	*	ug/L		118	52 - 102
Hexachlorocyclopentadiene	200	234		ug/L		117	40 - 120
Hexachloroethane	200	226	*	ug/L		113	52 - 102

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 160-239422/2-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239422

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Indeno[1,2,3-cd]pyrene	200	358	E *	ug/L		179	49 - 120
Isophorone	200	212	*	ug/L		106	56 - 101
2-Methylnaphthalene	200	250	*	ug/L		125	54 - 101
2-Methylphenol	200	192		ug/L		96	40 - 96
3 & 4 Methylphenol	200	191	*	ug/L		96	40 - 87
Naphthalene	200	251	*	ug/L		126	54 - 98
2-Nitroaniline	200	233		ug/L		116	57 - 120
3-Nitroaniline	200	244	*	ug/L		122	47 - 113
4-Nitroaniline	200	260	*	ug/L		130	51 - 119
Nitrobenzene	200	240	*	ug/L		120	59 - 110
2-Nitrophenol	200	266	*	ug/L		133	58 - 111
4-Nitrophenol	200	80.0		ug/L		40	20 - 47
N-Nitrosodi-n-propylamine	200	237	*	ug/L		119	59 - 115
Pentachlorophenol	200	264	*	ug/L		132	49 - 115
Phenanthrene	200	263	*	ug/L		132	59 - 110
Phenol	200	81.2		ug/L		41	20 - 69
Pyrene	200	271	*	ug/L		136	55 - 105
1,2,4-Trichlorobenzene	200	242	*	ug/L		121	56 - 100
2,4,5-Trichlorophenol	200	252	*	ug/L		126	56 - 113
2,4,6-Trichlorophenol	200	265	*	ug/L		133	47 - 116

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*129*	*X*	*43 - 108*
2-Fluorophenol (Surr)	*65*	*X*	*15 - 59*
Nitrobenzene-d5 (Surr)	*120*	*X*	*50 - 101*
Phenol-d5 (Surr)	*43*		*10 - 50*
Terphenyl-d14 (Surr)	*132*	*X*	*21 - 97*
2,4,6-Tribromophenol (Surr)	*145*	*X*	*37 - 120*

Lab Sample ID: LCSD 160-239422/3-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239422

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	200	212		ug/L		106	58 - 108	20	20
Acenaphthylene	200	212		ug/L		106	59 - 110	17	20
Anthracene	200	218	*	ug/L		109	59 - 106	19	20
Benzo[a]anthracene	200	224	*	ug/L		112	56 - 105	18	20
Benzo[a]pyrene	200	309	E *	ug/L		155	54 - 109	19	20
Benzo[b]fluoranthene	200	326	E *	ug/L		163	58 - 109	20	20
Benzo[g,h,i]perylene	200	286	*	ug/L		143	50 - 119	17	20
Benzo[k]fluoranthene	200	309	E *	ug/L		154	54 - 109	21	20
Bis(2-chloroethoxy)methane	200	213		ug/L		107	59 - 110	19	20
Bis(2-chloroethyl)ether	200	205	*	ug/L		103	58 - 109	21	20
bis(2 chloro-1-methylethyl) ether	200	178		ug/L		89	49 - 97	19	20
Bis(2-ethylhexyl) phthalate	200	232	*	ug/L		116	58 - 111	21	20
4-Bromophenyl phenyl ether	200	224	*	ug/L		112	62 - 98	20	20
Butyl benzyl phthalate	200	227	*	ug/L		114	56 - 111	18	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 160-239422/3-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239422

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloroaniline	200	162	*	ug/L		81	43 - 97	23	20
4-Chloro-3-methylphenol	200	192		ug/L		96	51 - 102	18	20
2-Chloronaphthalene	200	212		ug/L		106	58 - 109	20	20
2-Chlorophenol	200	185		ug/L		93	47 - 97	19	20
4-Chlorophenyl phenyl ether	200	225	*	ug/L		112	59 - 110	19	20
Chrysene	200	230	*	ug/L		115	55 - 107	18	20
Dibenz(a,h)anthracene	200	305	E *	ug/L		152	52 - 118	17	20
Dibenzofuran	200	212		ug/L		106	57 - 106	18	20
3,3'-Dichlorobenzidine	200	199		ug/L		100	50 - 105	19	20
2,4-Dichlorophenol	200	203		ug/L		102	55 - 104	20	20
Diethyl phthalate	200	215		ug/L		108	58 - 113	18	20
2,4-Dimethylphenol	200	175	*	ug/L		87	53 - 99	21	20
Dimethyl phthalate	200	215		ug/L		108	60 - 114	19	20
Di-n-butyl phthalate	200	215	*	ug/L		108	60 - 105	18	20
4,6-Dinitro-2-methylphenol	200	223		ug/L		112	56 - 118	19	20
2,4-Dinitrophenol	200	178		ug/L		89	53 - 119	11	20
2,4-Dinitrotoluene	200	220		ug/L		110	57 - 117	20	20
2,6-Dinitrotoluene	200	222		ug/L		111	59 - 117	18	20
Di-n-octyl phthalate	200	239	*	ug/L		120	59 - 113	18	20
Diphenylamine	200	209	*	ug/L		104	58 - 102	20	20
Fluoranthene	200	218		ug/L		109	56 - 113	19	20
Fluorene	200	223		ug/L		112	61 - 113	19	20
Hexachlorobenzene	200	218		ug/L		109	57 - 113	20	20
Hexachlorobutadiene	200	185	*	ug/L		92	52 - 102	24	20
Hexachlorocyclopentadiene	200	186	*	ug/L		93	40 - 120	23	20
Hexachloroethane	200	174	*	ug/L		87	52 - 102	26	20
Indeno[1,2,3-cd]pyrene	200	301	E *	ug/L		150	49 - 120	17	20
Isophorone	200	175		ug/L		88	56 - 101	19	20
2-Methylnaphthalene	200	202	*	ug/L		101	54 - 101	21	20
2-Methylphenol	200	157		ug/L		79	40 - 96	20	20
3 & 4 Methylphenol	200	161		ug/L		80	40 - 87	18	20
Naphthalene	200	202	*	ug/L		101	54 - 98	22	20
2-Nitroaniline	200	191		ug/L		96	57 - 120	20	20
3-Nitroaniline	200	201		ug/L		100	47 - 113	19	20
4-Nitroaniline	200	215		ug/L		107	51 - 119	19	20
Nitrobenzene	200	198		ug/L		99	59 - 110	19	20
2-Nitrophenol	200	219		ug/L		110	58 - 111	19	20
4-Nitrophenol	200	72.0		ug/L		36	20 - 47	11	20
N-Nitrosodi-n-propylamine	200	196		ug/L		98	59 - 115	19	20
Pentachlorophenol	200	218		ug/L		109	49 - 115	19	20
Phenanthrene	200	218		ug/L		109	59 - 110	19	20
Phenol	200	72.1		ug/L		36	20 - 69	12	20
Pyrene	200	227	*	ug/L		113	55 - 105	18	20
1,2,4-Trichlorobenzene	200	192	*	ug/L		96	56 - 100	23	20
2,4,5-Trichlorophenol	200	211		ug/L		105	56 - 113	18	20
2,4,6-Trichlorophenol	200	222		ug/L		111	47 - 116	18	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 160-239422/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240637 — **Prep Batch: 239422**

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*106*		*43 - 108*
2-Fluorophenol (Surr)	*56*		*15 - 59*
Nitrobenzene-d5 (Surr)	*99*		*50 - 101*
Phenol-d5 (Surr)	*38*		*10 - 50*
Terphenyl-d14 (Surr)	*109*	*X*	*21 - 97*
2,4,6-Tribromophenol (Surr)	*123*	*X*	*37 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-240641/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240641

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.010	mg/L			03/15/16 15:58	1
Sulfate	ND		0.50	0.050	mg/L			03/15/16 15:58	1
Chloride	ND		0.20	0.020	mg/L			03/15/16 15:58	1

Lab Sample ID: LCS 160-240641/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240641

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.00	0.986		mg/L		99	90 - 110
Sulfate	8.00	7.63		mg/L		95	90 - 110
Chloride	2.00	1.91		mg/L		96	90 - 110

Lab Sample ID: 160-16333-J-2 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240641

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	2.1	F1	2.00	4.57	E F1	mg/L		123	90 - 110

Lab Sample ID: 160-16333-J-2 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240641

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	2.1	F1	2.19		mg/L		4	20

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 160-16333-J-2 MS
Matrix: Water
Analysis Batch: 240641

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate - DL	49		80.0	126		mg/L		95	90 - 110
Chloride - DL	33		40.0	71.2		mg/L		97	90 - 110

Lab Sample ID: 160-16333-J-2 DU
Matrix: Water
Analysis Batch: 240641

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate - DL	49		49.1		mg/L		0.7	20
Chloride - DL	33		32.5		mg/L		0.2	20

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-239605/1-A
Matrix: Water
Analysis Batch: 242174

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239605

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	3.7	ug/L		03/08/16 14:46	03/24/16 15:02	1
Arsenic	ND		10	1.8	ug/L		03/08/16 14:46	03/24/16 15:02	1
Barium	ND		50	2.1	ug/L		03/08/16 14:46	03/24/16 15:02	1
Beryllium	ND		5.0	0.28	ug/L		03/08/16 14:46	03/24/16 15:02	1
Boron	ND	^	50	7.2	ug/L		03/08/16 14:46	03/24/16 15:02	1
Cadmium	ND		5.0	0.34	ug/L		03/08/16 14:46	03/24/16 15:02	1
CaHard	73.7	J	1000	54	ug/L		03/08/16 14:46	03/24/16 15:02	1
Calcium	ND		1000	54	ug/L		03/08/16 14:46	03/24/16 15:02	1
Chromium	ND		10	3.4	ug/L		03/08/16 14:46	03/24/16 15:02	1
Cobalt	ND		50	2.7	ug/L		03/08/16 14:46	03/24/16 15:02	1
Copper	ND		25	2.1	ug/L		03/08/16 14:46	03/24/16 15:02	1
Iron	ND		100	13	ug/L		03/08/16 14:46	03/24/16 15:02	1
Lead	ND		10	0.60	ug/L		03/08/16 14:46	03/24/16 15:02	1
Magnesium	ND		1.0	0.051	mg/L		03/08/16 14:46	03/24/16 15:02	1
Manganese	ND		15	1.0	ug/L		03/08/16 14:46	03/24/16 15:02	1
MgHard	ND		1000	51	ug/L		03/08/16 14:46	03/24/16 15:02	1
Nickel	ND		0.040	0.0026	mg/L		03/08/16 14:46	03/24/16 15:02	1
Phosphorus	30.1	J	250	14	ug/L		03/08/16 14:46	03/24/16 15:02	1
Selenium	ND		15	2.1	ug/L		03/08/16 14:46	03/24/16 15:02	1
Silver	ND		20	0.99	ug/L		03/08/16 14:46	03/24/16 15:02	1
Sodium	ND		1000	110	ug/L		03/08/16 14:46	03/24/16 15:02	1
Thallium	ND		20	2.4	ug/L		03/08/16 14:46	03/24/16 15:02	1
Total Hardness	ND		5000	1700	ug/L		03/08/16 14:46	03/24/16 15:02	1
Vanadium	ND		50	4.4	ug/L		03/08/16 14:46	03/24/16 15:02	1
Zinc	ND		20	8.3	ug/L		03/08/16 14:46	03/24/16 15:02	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 160-239605/2-A
Matrix: Water
Analysis Batch: 242174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239605

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	510		ug/L		102	80 - 120
Arsenic	1000	998		ug/L		100	80 - 120
Barium	1000	1020		ug/L		102	80 - 120
Beryllium	1000	1030		ug/L		103	80 - 120
Boron	2000	2070	^	ug/L		104	80 - 120
Cadmium	1000	1030		ug/L		103	80 - 120
Calcium	10000	11100		ug/L		111	80 - 120
Chromium	1000	1090		ug/L		109	80 - 120
Cobalt	1000	1100		ug/L		110	80 - 120
Copper	1000	1090		ug/L		109	80 - 120
Iron	10000	10100		ug/L		101	80 - 120
Lead	1000	1070		ug/L		107	80 - 120
Magnesium	10.0	10.3		mg/L		103	80 - 120
Manganese	1000	1030		ug/L		103	80 - 120
Nickel	1.00	1.09		mg/L		109	80 - 120
Phosphorus	1000	1120		ug/L		112	80 - 120
Selenium	500	512		ug/L		102	80 - 120
Silver	200	215		ug/L		107	80 - 120
Sodium	10000	10300		ug/L		103	80 - 120
Thallium	200	220		ug/L		110	80 - 120
Vanadium	1000	1010		ug/L		101	80 - 120
Zinc	1000	1050		ug/L		105	80 - 120

Lab Sample ID: 160-16075-E-5-B MS
Matrix: Water
Analysis Batch: 242174

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 239605

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		500	528		ug/L		106	75 - 125
Arsenic	ND		1000	1060		ug/L		106	75 - 125
Barium	38	J	1000	1060		ug/L		102	75 - 125
Beryllium	ND		1000	1040		ug/L		104	75 - 125
Cadmium	ND		1000	1080		ug/L		108	75 - 125
Calcium	16000		10000	27000		ug/L		113	75 - 125
Chromium	ND		1000	1100		ug/L		110	75 - 125
Cobalt	ND		1000	1140		ug/L		114	75 - 125
Copper	ND		1000	1130		ug/L		113	75 - 125
Iron	670		10000	10800		ug/L		102	75 - 125
Lead	ND		1000	1100		ug/L		110	75 - 125
Magnesium	6.2		10.0	16.6		mg/L		103	75 - 125
Manganese	70		1000	1100		ug/L		103	75 - 125
Nickel	0.0068	J	1.00	1.13		mg/L		112	75 - 125
Phosphorus	53	J B	1000	1220		ug/L		116	75 - 125
Selenium	2.3	J	500	543		ug/L		108	75 - 125
Silver	ND		200	219		ug/L		109	75 - 125
Sodium	47000		10000	57300	4	ug/L		101	75 - 125
Thallium	ND		200	224		ug/L		112	75 - 125
Vanadium	ND		1000	1020		ug/L		102	75 - 125

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 160-16075-E-5-B MS
Matrix: Water
Analysis Batch: 242174

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 239605

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	ND		1000	1110		ug/L		111	75 - 125

Lab Sample ID: 160-16075-E-5-C MSD
Matrix: Water
Analysis Batch: 242174

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 239605

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		500	524		ug/L		105	75 - 125	1	20
Arsenic	ND		1000	1040		ug/L		104	75 - 125	1	20
Barium	38	J	1000	1060		ug/L		102	75 - 125	0	20
Beryllium	ND		1000	1040		ug/L		104	75 - 125	0	20
Cadmium	ND		1000	1070		ug/L		107	75 - 125	1	20
Calcium	16000		10000	26900		ug/L		111	75 - 125	1	20
Chromium	ND		1000	1100		ug/L		110	75 - 125	1	20
Cobalt	ND		1000	1120		ug/L		112	75 - 125	1	20
Copper	ND		1000	1110		ug/L		111	75 - 125	2	20
Iron	670		10000	10800		ug/L		101	75 - 125	0	20
Lead	ND		1000	1090		ug/L		109	75 - 125	1	20
Magnesium	6.2		10.0	16.7		mg/L		105	75 - 125	1	20
Manganese	70		1000	1110		ug/L		104	75 - 125	1	20
Nickel	0.0068	J	1.00	1.12		mg/L		111	75 - 125	1	20
Phosphorus	53	J B	1000	1200		ug/L		115	75 - 125	1	20
Selenium	2.3	J	500	533		ug/L		106	75 - 125	2	20
Silver	ND		200	219		ug/L		109	75 - 125	0	20
Sodium	47000		10000	57700	4	ug/L		105	75 - 125	1	20
Thallium	ND		200	222		ug/L		111	75 - 125	1	20
Vanadium	ND		1000	1030		ug/L		103	75 - 125	1	20
Zinc	ND		1000	1100		ug/L		110	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-240812/1-A
Matrix: Water
Analysis Batch: 240903

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240812

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/16/16 13:53	03/17/16 09:22	1

Lab Sample ID: LCS 160-240812/2-A
Matrix: Water
Analysis Batch: 240903

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240812

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.98		ug/L		100	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 160-16336-B-2-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240903 — **Prep Batch: 240812**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		5.00	4.90		ug/L		98	80 - 120		

Lab Sample ID: 160-16336-B-2-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240903 — **Prep Batch: 240812**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		5.00	4.90		ug/L		98	80 - 120	0	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 160-239473/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239473

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		5.0	3.5	mg/L			03/08/16 10:41	1

Lab Sample ID: LCS 160-239473/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239473

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids (TDS)			500	487		mg/L		97	90 - 110		

Lab Sample ID: 160-16336-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239473

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids (TDS)	1100			1060		mg/L				0.9	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 160-242771/12 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.050	0.0083	mg/L			03/29/16 14:44	1

Lab Sample ID: LCS 160-242771/13 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia			0.500	0.518		mg/L		104	90 - 110		

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 160-16344-D-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia	ND	F1	0.500	0.570	F1	mg/L		114	90 - 110		

Lab Sample ID: 160-16344-D-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ammonia	ND	F1		ND		mg/L				NC	20

Method: 353.1 Preserved - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 160-240661/15 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite	ND		0.050	0.0047	mg/L			03/15/16 17:20	1

Lab Sample ID: LCS 160-240661/16 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate/Nitrite			0.500	0.484		mg/L		97	90 - 110		

Lab Sample ID: 160-16308-H-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate/Nitrite	ND	F1	0.500	0.446	F1	mg/L		89	90 - 110		

Lab Sample ID: 160-16308-H-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrate/Nitrite	ND	F1		ND		mg/L				NC	20

Method: 410.4 - COD

Lab Sample ID: MB 160-239667/3-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	6.5	mg/L		03/09/16 09:08	03/09/16 13:45	1

Method: 410.4 - COD (Continued)

Lab Sample ID: LCS 160-239667/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	49.0		mg/L		98	90 - 110

Lab Sample ID: 160-16333-L-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	ND		50.0	53.0		mg/L		106	90 - 110

Lab Sample ID: 160-16308-H-1-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chemical Oxygen Demand	ND		ND		mg/L		NC	20

Method: 415.1 - TOC

Lab Sample ID: MB 160-239751/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239751

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.72	mg/L			03/08/16 15:29	1

Lab Sample ID: LCS 160-239751/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239751

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.62		mg/L		96	90 - 110

Method: 415.1 - TOC - DL

Lab Sample ID: 160-16333-A-1 MS ^50 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239751

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - DL	110		250	356		mg/L		98	76 - 120

Lab Sample ID: 160-16333-A-1 DU ^50 — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239751

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon - DL	110		107		mg/L		3	20

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-239388/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242773 — **Prep Batch: 239388**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02357	U	0.0443	0.0443	1.00	0.0777	pCi/L	03/07/16 13:43	03/29/16 08:39	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*03/07/16 13:43*	*03/29/16 08:39*	*1*

Lab Sample ID: LCS 160-239388/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242773 — **Prep Batch: 239388**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	12.03		1.17	1.00	0.0831	pCi/L	108	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*

Lab Sample ID: 310-75413-B-11-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242773 — **Prep Batch: 239388**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	0.117		11.4	13.24		1.29	1.00	0.0625	pCi/L	115	75 - 138	0.46	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*92.9*		*40 - 110*

Lab Sample ID: 310-75413-C-11-A MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242773 — **Prep Batch: 239388**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226	0.117		11.5	12.11		1.19	1.00	0.0770	pCi/L	104	75 - 138		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*99.4*		*40 - 110*

Lab Sample ID: MB 160-239583/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242941 — **Prep Batch: 239583**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.001703	U	0.0324	0.0324	1.00	0.0668	pCi/L	03/08/16 12:46	03/30/16 07:50	1

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: MB 160-239583/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242941 — **Prep Batch: 239583**

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110	03/08/16 12:46	03/30/16 07:50	1

Lab Sample ID: LCS 160-239583/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242941 — **Prep Batch: 239583**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	13.35		1.29	1.00	0.0968	pCi/L	120	68 - 137		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	107		40 - 110

Lab Sample ID: LCSD 160-239583/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242941 — **Prep Batch: 239583**

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.2	13.29		1.29	1.00	0.0906	pCi/L	119	68 - 137	0.02	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-239468/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241797 — **Prep Batch: 239468**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.136		0.357	0.372	1.00	0.487	pCi/L	03/08/16 10:28	03/23/16 08:30	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110	03/08/16 10:28	03/23/16 08:30	1
Y Carrier	72.1		40 - 110	03/08/16 10:28	03/23/16 08:30	1

Lab Sample ID: LCS 160-239468/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241797 — **Prep Batch: 239468**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			9.26	9.559		1.08	1.00	0.361	pCi/L	103	56 - 140		

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-239468/2-A
Matrix: Water
Analysis Batch: 241797

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239468

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	84.5		40 - 110

Lab Sample ID: 310-75413-B-11-D MSD
Matrix: Water
Analysis Batch: 241797

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 239468

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.242	U	9.44	10.81		1.36	1.00	0.699	pCi/L	115	45 - 150	0.23	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	92.9		40 - 110
Y Carrier	82.6		40 - 110

Lab Sample ID: 310-75413-C-11-B MS
Matrix: Water
Analysis Batch: 241797

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 239468

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228	0.242	U	9.53	10.23		1.17	1.00	0.413	pCi/L	107	45 - 150		

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	99.4		40 - 110
Y Carrier	81.1		40 - 110

Lab Sample ID: MB 160-239662/1-A
Matrix: Water
Analysis Batch: 241797

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239662

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.07816	U	0.218	0.218	1.00	0.376	pCi/L	03/09/16 08:31	03/23/16 12:08	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110	03/09/16 08:31	03/23/16 12:08	1
Y Carrier	80.4		40 - 110	03/09/16 08:31	03/23/16 12:08	1

Lab Sample ID: LCS 160-239662/2-A
Matrix: Water
Analysis Batch: 241797

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239662

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			15.4	9.740		1.10	1.00	0.372	pCi/L	63	56 - 140		

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-239662/2-A
Matrix: Water
Analysis Batch: 241797

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239662

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	107		40 - 110
Y Carrier	80.7		40 - 110

Lab Sample ID: LCSD 160-239662/3-A
Matrix: Water
Analysis Batch: 241797

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239662

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			15.4	10.46		1.17	1.00	0.402	pCi/L	68	56 - 140	0.32	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	81.9		40 - 110

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-242194/1-A
Matrix: Water
Analysis Batch: 242431

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242194

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	60.81	U	241	241	500	432	pCi/L	03/25/16 10:51	03/27/16 19:00	1

Lab Sample ID: LCS 160-242194/2-A
Matrix: Water
Analysis Batch: 242431

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242194

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium			4660	4565		715	500	410	pCi/L	98	74 - 114		

Lab Sample ID: 160-16333-B-2-B MS
Matrix: Water
Analysis Batch: 242431

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 242194

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium	146	U	4660	4115		673	500	410	pCi/L	88	67 - 130		

Lab Sample ID: 160-16333-B-1-B DU
Matrix: Water
Analysis Batch: 242431

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 242194

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Tritium	25500			24250		2510	500	439	pCi/L			0.25	1

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Lab Sample ID: MB 160-240784/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242366 — **Prep Batch: 240784**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.2218		0.106	0.108	1.00	0.112	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Thorium-229	*85.7*		*30 - 110*	*03/16/16 09:50*	*03/24/16 18:20*	*1*

Lab Sample ID: LCS 160-240784/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242377 — **Prep Batch: 240784**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Thorium-230			8.03	8.806		0.938	1.00	0.113	pCi/L	110	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Thorium-229	*90.8*		*30 - 110*

Lab Sample ID: 160-16308-D-1-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242305 — **Prep Batch: 240784**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Thorium-230	0.206			0.1600		0.0864	1.00	0.0800	pCi/L			0.25	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Thorium-229	*89.3*		*30 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-240794/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241974 — **Prep Batch: 240794**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.03617	U	0.0548	0.0549	1.00	0.0950	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-235/236	0.002143	U	0.0299	0.0299	1.00	0.0846	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-238	0.02063	U	0.0292	0.0292	1.00	0.0309	pCi/L	03/16/16 09:50	03/23/16 12:15	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*87.3*		*30 - 110*	*03/16/16 09:50*	*03/23/16 12:15*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-240794/2-A
Matrix: Water
Analysis Batch: 241976

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240794

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			12.7	13.02		1.32	1.00	0.0971	pCi/L	102	84 - 120		
Uranium-238			13.0	13.21		1.34	1.00	0.0316	pCi/L	101	83 - 121		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*85.2*		*30 - 110*

Lab Sample ID: 160-16308-D-1-D DU
Matrix: Water
Analysis Batch: 241978

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 240794

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Uranium-233/234	1.44			1.644		0.300	1.00	0.0853	pCi/L			0.35	1
Uranium-235/236	0.0656			0.02086	U	0.0389	1.00	0.0728	pCi/L			0.46	1
Uranium-238	1.05			0.9948		0.223	1.00	0.0695	pCi/L			0.13	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*81.8*		*30 - 110*

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

GC/MS VOA

Analysis Batch: 239988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16355-1	PZ-202-SS	Total/NA	Water	8260C	
160-16355-2	PZ-201A-SS	Total/NA	Water	8260C	
160-16355-3	PZ-116-SS	Total/NA	Water	8260C	
160-16355-4	LCS-5A	Total/NA	Water	8260C	
160-16355-5	TRIP BLANK	Total/NA	Water	8260C	
160-16355-6	TRIP BLANK	Total/NA	Water	8260C	
160-16391-J-1 MS	Matrix Spike	Total/NA	Water	8260C	
160-16391-J-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 160-239988/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-239988/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-239988/7	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 239422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16355-1	PZ-202-SS	Total/NA	Water	3510C	
160-16355-2	PZ-201A-SS	Total/NA	Water	3510C	
160-16355-3	PZ-116-SS	Total/NA	Water	3510C	
160-16355-4	LCS-5A	Total/NA	Water	3510C	
LCS 160-239422/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 160-239422/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-239422/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 240637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16355-1	PZ-202-SS	Total/NA	Water	8270D	239422
160-16355-2	PZ-201A-SS	Total/NA	Water	8270D	239422
160-16355-3	PZ-116-SS	Total/NA	Water	8270D	239422
160-16355-4	LCS-5A	Total/NA	Water	8270D	239422
LCS 160-239422/2-A	Lab Control Sample	Total/NA	Water	8270D	239422
LCSD 160-239422/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	239422
MB 160-239422/1-A	Method Blank	Total/NA	Water	8270D	239422

HPLC/IC

Analysis Batch: 240641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16333-J-2 DU	Duplicate	Total/NA	Water	300.0	
160-16333-J-2 DU - DL	Duplicate	Total/NA	Water	300.0	
160-16333-J-2 MS	Matrix Spike	Total/NA	Water	300.0	
160-16333-J-2 MS - DL	Matrix Spike	Total/NA	Water	300.0	
160-16355-1	PZ-202-SS	Total/NA	Water	300.0	
160-16355-1 - DL	PZ-202-SS	Total/NA	Water	300.0	
160-16355-2	PZ-201A-SS	Total/NA	Water	300.0	
160-16355-2 - DL	PZ-201A-SS	Total/NA	Water	300.0	
160-16355-3	PZ-116-SS	Total/NA	Water	300.0	
160-16355-3 - DL	PZ-116-SS	Total/NA	Water	300.0	
160-16355-4 - DL	LCS-5A	Total/NA	Water	300.0	
160-16355-4 - DL2	LCS-5A	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 240641 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-240641/4	Lab Control Sample	Total/NA	Water	300.0	
MB 160-240641/3	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 239605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16075-E-5-B MS	Matrix Spike	Total/NA	Water	3010A	
160-16075-E-5-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	
160-16355-1	PZ-202-SS	Total/NA	Water	3010A	
160-16355-2	PZ-201A-SS	Total/NA	Water	3010A	
160-16355-3	PZ-116-SS	Total/NA	Water	3010A	
160-16355-4	LCS-5A	Total/NA	Water	3010A	
LCS 160-239605/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-239605/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 240812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16336-B-2-C MS	Matrix Spike	Total/NA	Water	7470A	
160-16336-B-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
160-16355-1	PZ-202-SS	Total/NA	Water	7470A	
160-16355-2	PZ-201A-SS	Total/NA	Water	7470A	
160-16355-3	PZ-116-SS	Total/NA	Water	7470A	
160-16355-4	LCS-5A	Total/NA	Water	7470A	
LCS 160-240812/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 160-240812/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 240903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16336-B-2-C MS	Matrix Spike	Total/NA	Water	7470A	240812
160-16336-B-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	240812
160-16355-1	PZ-202-SS	Total/NA	Water	7470A	240812
160-16355-2	PZ-201A-SS	Total/NA	Water	7470A	240812
160-16355-3	PZ-116-SS	Total/NA	Water	7470A	240812
160-16355-4	LCS-5A	Total/NA	Water	7470A	240812
LCS 160-240812/2-A	Lab Control Sample	Total/NA	Water	7470A	240812
MB 160-240812/1-A	Method Blank	Total/NA	Water	7470A	240812

Analysis Batch: 242174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16075-E-5-B MS	Matrix Spike	Total/NA	Water	6010C	239605
160-16075-E-5-C MSD	Matrix Spike Duplicate	Total/NA	Water	6010C	239605
160-16355-1	PZ-202-SS	Total/NA	Water	6010C	239605
160-16355-2	PZ-201A-SS	Total/NA	Water	6010C	239605
160-16355-3	PZ-116-SS	Total/NA	Water	6010C	239605
160-16355-4	LCS-5A	Total/NA	Water	6010C	239605
LCS 160-239605/2-A	Lab Control Sample	Total/NA	Water	6010C	239605
MB 160-239605/1-A	Method Blank	Total/NA	Water	6010C	239605

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Metals (Continued)

Analysis Batch: 244954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16355-1	PZ-202-SS	Total/NA	Water	6010C	239605
160-16355-2	PZ-201A-SS	Total/NA	Water	6010C	239605
160-16355-3	PZ-116-SS	Total/NA	Water	6010C	239605
160-16355-4	LCS-5A	Total/NA	Water	6010C	239605

General Chemistry

Analysis Batch: 239473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16336-A-1 DU	Duplicate	Total/NA	Water	160.1	
160-16355-1 - DL	PZ-202-SS	Total/NA	Water	160.1	
160-16355-2	PZ-201A-SS	Total/NA	Water	160.1	
160-16355-3	PZ-116-SS	Total/NA	Water	160.1	
160-16355-4 - DL	LCS-5A	Total/NA	Water	160.1	
LCS 160-239473/2	Lab Control Sample	Total/NA	Water	160.1	
MB 160-239473/1	Method Blank	Total/NA	Water	160.1	

Prep Batch: 239667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-H-1-B DU	Duplicate	Total/NA	Water	410.4	
160-16333-L-3-B MS	Matrix Spike	Total/NA	Water	410.4	
160-16355-1 - DL	PZ-202-SS	Total/NA	Water	410.4	
160-16355-2	PZ-201A-SS	Total/NA	Water	410.4	
160-16355-3	PZ-116-SS	Total/NA	Water	410.4	
160-16355-4 - DL	LCS-5A	Total/NA	Water	410.4	
LCS 160-239667/4-A	Lab Control Sample	Total/NA	Water	410.4	
MB 160-239667/3-A	Method Blank	Total/NA	Water	410.4	

Analysis Batch: 239751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16333-A-1 DU ^50 - DL	Duplicate	Total/NA	Water	415.1	
160-16333-A-1 MS ^50 - DL	Matrix Spike	Total/NA	Water	415.1	
160-16355-1 - DL	PZ-202-SS	Total/NA	Water	415.1	
160-16355-2	PZ-201A-SS	Total/NA	Water	415.1	
160-16355-3	PZ-116-SS	Total/NA	Water	415.1	
160-16355-4 - DL	LCS-5A	Total/NA	Water	415.1	
LCS 160-239751/5	Lab Control Sample	Total/NA	Water	415.1	
MB 160-239751/4	Method Blank	Total/NA	Water	415.1	

Analysis Batch: 239798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-H-1-B DU	Duplicate	Total/NA	Water	410.4	239667
160-16333-L-3-B MS	Matrix Spike	Total/NA	Water	410.4	239667
160-16355-1 - DL	PZ-202-SS	Total/NA	Water	410.4	239667
160-16355-2	PZ-201A-SS	Total/NA	Water	410.4	239667
160-16355-3	PZ-116-SS	Total/NA	Water	410.4	239667
160-16355-4 - DL	LCS-5A	Total/NA	Water	410.4	239667
LCS 160-239667/4-A	Lab Control Sample	Total/NA	Water	410.4	239667
MB 160-239667/3-A	Method Blank	Total/NA	Water	410.4	239667

General Chemistry (Continued)

Analysis Batch: 240661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-H-1 DU	Duplicate	Total/NA	Water	353.1 Preserved	
160-16308-H-1 MS	Matrix Spike	Total/NA	Water	353.1 Preserved	
160-16355-1	PZ-202-SS	Total/NA	Water	353.1 Preserved	
160-16355-2	PZ-201A-SS	Total/NA	Water	353.1 Preserved	
160-16355-3	PZ-116-SS	Total/NA	Water	353.1 Preserved	
160-16355-4	LCS-5A	Total/NA	Water	353.1 Preserved	
LCS 160-240661/16	Lab Control Sample	Total/NA	Water	353.1 Preserved	
MB 160-240661/15	Method Blank	Total/NA	Water	353.1 Preserved	

Analysis Batch: 242771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16344-D-1 DU	Duplicate	Total/NA	Water	350.1	
160-16344-D-1 MS	Matrix Spike	Total/NA	Water	350.1	
160-16355-1	PZ-202-SS	Total/NA	Water	350.1	
160-16355-2	PZ-201A-SS	Total/NA	Water	350.1	
160-16355-3	PZ-116-SS	Total/NA	Water	350.1	
160-16355-4 - DL2	LCS-5A	Total/NA	Water	350.1	
LCS 160-242771/13	Lab Control Sample	Total/NA	Water	350.1	
MB 160-242771/12	Method Blank	Total/NA	Water	350.1	

Rad

Prep Batch: 239388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16355-1	PZ-202-SS	Total/NA	Water	PrecSep-21	
160-16355-2	PZ-201A-SS	Total/NA	Water	PrecSep-21	
160-16355-3	PZ-116-SS	Total/NA	Water	PrecSep-21	
160-16355-4	LCS-5A	Total/NA	Water	PrecSep-21	
310-75413-B-11-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	
310-75413-C-11-A MS	Matrix Spike	Total/NA	Water	PrecSep-21	
LCS 160-239388/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-239388/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Filtration Batch: 239454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16355-1	PZ-202-SS	Dissolved	Water	Filtration	
160-16355-2	PZ-201A-SS	Dissolved	Water	Filtration	
160-16355-3	PZ-116-SS	Dissolved	Water	Filtration	
160-16355-4	LCS-5A	Dissolved	Water	Filtration	

Prep Batch: 239468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16355-1	PZ-202-SS	Total/NA	Water	PrecSep_0	
160-16355-2	PZ-201A-SS	Total/NA	Water	PrecSep_0	
160-16355-3	PZ-116-SS	Total/NA	Water	PrecSep_0	
160-16355-4	LCS-5A	Total/NA	Water	PrecSep_0	
310-75413-B-11-D MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	
310-75413-C-11-B MS	Matrix Spike	Total/NA	Water	PrecSep_0	
LCS 160-239468/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-239468/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Rad (Continued)

Prep Batch: 239583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16355-1	PZ-202-SS	Dissolved	Water	PrecSep-21	239454
160-16355-2	PZ-201A-SS	Dissolved	Water	PrecSep-21	239454
160-16355-3	PZ-116-SS	Dissolved	Water	PrecSep-21	239454
160-16355-4	LCS-5A	Dissolved	Water	PrecSep-21	239454
LCS 160-239583/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-239583/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
MB 160-239583/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 239662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16355-1	PZ-202-SS	Dissolved	Water	PrecSep_0	239454
160-16355-2	PZ-201A-SS	Dissolved	Water	PrecSep_0	239454
160-16355-3	PZ-116-SS	Dissolved	Water	PrecSep_0	239454
160-16355-4	LCS-5A	Dissolved	Water	PrecSep_0	239454
LCS 160-239662/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-239662/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
MB 160-239662/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 240784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-D-1-B DU	Duplicate	Total/NA	Water	ExtChrom	
160-16355-1	PZ-202-SS	Total/NA	Water	ExtChrom	
160-16355-2	PZ-201A-SS	Total/NA	Water	ExtChrom	
160-16355-3	PZ-116-SS	Total/NA	Water	ExtChrom	
160-16355-4	LCS-5A	Total/NA	Water	ExtChrom	
LCS 160-240784/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
MB 160-240784/1-A	Method Blank	Total/NA	Water	ExtChrom	

Prep Batch: 240794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-D-1-D DU	Duplicate	Total/NA	Water	ExtChrom	
160-16355-1	PZ-202-SS	Total/NA	Water	ExtChrom	
160-16355-2	PZ-201A-SS	Total/NA	Water	ExtChrom	
160-16355-3	PZ-116-SS	Total/NA	Water	ExtChrom	
160-16355-4	LCS-5A	Total/NA	Water	ExtChrom	
LCS 160-240794/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
MB 160-240794/1-A	Method Blank	Total/NA	Water	ExtChrom	

Prep Batch: 242194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16333-B-1-B DU	Duplicate	Total/NA	Water	LSC_Dist_Susp	
160-16333-B-2-B MS	Matrix Spike	Total/NA	Water	LSC_Dist_Susp	
160-16355-1	PZ-202-SS	Total/NA	Water	LSC_Dist_Susp	
160-16355-2	PZ-201A-SS	Total/NA	Water	LSC_Dist_Susp	
160-16355-3	PZ-116-SS	Total/NA	Water	LSC_Dist_Susp	
160-16355-4	LCS-5A	Total/NA	Water	LSC_Dist_Susp	
LCS 160-242194/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
MB 160-242194/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	12DCE	TOL
Lab Sample ID	Client Sample ID	(71-139)	(80-121)	(76-121)	(80-129)
160-16355-1	PZ-202-SS	98	103	102	102
160-16355-2	PZ-201A-SS	99	106	107	100
160-16355-3	PZ-116-SS	99	102	100	100
160-16355-4	LCS-5A	95	94	95	96
160-16355-5	TRIP BLANK	99	101	101	100
160-16355-6	TRIP BLANK	100	101	99	99
160-16391-J-1 MS	Matrix Spike	91	103	105	97
160-16391-J-1 MSD	Matrix Spike Duplicate	92	104	108	95
LCS 160-239988/4	Lab Control Sample	91	101	99	97
LCSD 160-239988/5	Lab Control Sample Dup	93	99	98	97
MB 160-239988/7	Method Blank	97	100	97	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(43-108)	(15-59)	(50-101)	(10-50)	(21-97)	(37-120)
160-16355-1	PZ-202-SS	98	30	91	18	54	104
160-16355-2	PZ-201A-SS	92	29	85	16	62	97
160-16355-3	PZ-116-SS	84	27	78	15	59	88
160-16355-4	LCS-5A	96	38	102 X	33	47	93
LCS 160-239422/2-A	Lab Control Sample	129 X	65 X	120 X	43	132 X	145 X
LCSD 160-239422/3-A	Lab Control Sample Dup	106	56	99	38	109 X	123 X
MB 160-239422/1-A	Method Blank	121 X	60 X	114 X	39	125 X	128 X

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Tracer/Carrier Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Ba (40-110)
160-16355-1	PZ-202-SS	108
160-16355-2	PZ-201A-SS	107
160-16355-3	PZ-116-SS	100
160-16355-4	LCS-5A	106
310-75413-B-11-B MSD	Matrix Spike Duplicate	92.9
310-75413-C-11-A MS	Matrix Spike	99.4
LCS 160-239388/2-A	Lab Control Sample	103
LCS 160-239583/2-A	Lab Control Sample	107
LCSD 160-239583/3-A	Lab Control Sample Dup	103
MB 160-239388/1-A	Method Blank	100
MB 160-239583/1-A	Method Blank	103

Percent Yield (Acceptance Limits)

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Dissolved**

Lab Sample ID	Client Sample ID	Ba (40-110)
160-16355-1	PZ-202-SS	106
160-16355-2	PZ-201A-SS	102
160-16355-3	PZ-116-SS	102
160-16355-4	LCS-5A	85.8

Percent Yield (Acceptance Limits)

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
160-16355-1	PZ-202-SS	108	83.7
160-16355-2	PZ-201A-SS	107	81.9
160-16355-3	PZ-116-SS	100	86.4
160-16355-4	LCS-5A	106	81.9
310-75413-B-11-D MSD	Matrix Spike Duplicate	92.9	82.6
310-75413-C-11-B MS	Matrix Spike	99.4	81.1
LCS 160-239468/2-A	Lab Control Sample	103	84.5
LCS 160-239662/2-A	Lab Control Sample	107	80.7
LCSD 160-239662/3-A	Lab Control Sample Dup	103	81.9
MB 160-239468/1-A	Method Blank	100	72.1
MB 160-239662/1-A	Method Blank	103	80.4

Percent Yield (Acceptance Limits)

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Tracer/Carrier Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16355-1

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Dissolved**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
160-16355-1	PZ-202-SS	106	82.2
160-16355-2	PZ-201A-SS	102	82.2
160-16355-3	PZ-116-SS	102	81.9
160-16355-4	LCS-5A	85.8	84.1

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Th-229 (30-110)
160-16308-D-1-B DU	Duplicate	89.3
160-16355-1	PZ-202-SS	77.3
160-16355-2	PZ-201A-SS	78.0
160-16355-3	PZ-116-SS	75.5
160-16355-4	LCS-5A	65.6
LCS 160-240784/2-A	Lab Control Sample	90.8
MB 160-240784/1-A	Method Blank	85.7

Tracer/Carrier Legend

Th-229 = Thorium-229

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-16308-D-1-D DU	Duplicate	81.8
160-16355-1	PZ-202-SS	90.3
160-16355-2	PZ-201A-SS	82.5
160-16355-3	PZ-116-SS	84.7
160-16355-4	LCS-5A	81.0
LCS 160-240794/2-A	Lab Control Sample	85.2
MB 160-240794/1-A	Method Blank	87.3

Tracer/Carrier Legend

U-232 = Uranium-232

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 160-16391-1
Client Project/Site: Groundwater Samples

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 160-16391-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Missouri Attorney General's Office

Project: Groundwater Samples

Report Number: 160-16391-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica St. Louis attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 03/04/2016; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 15.0º C and 15.0º C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2), PZ-107-SS (160-16391-3) and TRIP BLANK (160-16391-4) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 03/10/2016.

Analytical Batch: 239988

The continuing calibration verification (CCV) associated with batch 160-239988 recovered above the upper control limit for Methyl bromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. (CCVIS 160-239988/3)

The following compounds did not meet the minimum relative response factor limits in the continuing calibration verification (CCV) associated with batch 160-239988: Acetone and Methyl Ethyl Ketone. A low-level LOQV was analyzed at the reporting limit (5ug/L) and the affected analytes were detected. Target analytes recovering above the reporting limit will be qualified and reported. (CCVIS 160-239988/3)

Job ID: 160-16391-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC MS)
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for semivolatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 03/07/2016 and analyzed on 03/16/2016.

Analytical Batch: 240637
Famphur recovered outside initial calibration criteria at 102.6 % RSD. The ICV recovered low at 77.9 %D. The CCV recovered low at 74.2 %D. Hexachlorophene recovered outside the initial calibration at 56.4 % RSD. These compounds are poor responding compounds and will be estimated in the samples associated with this calibration. The data is reported with this narrative. PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2), PZ-107-SS (160-16391-3), (CCV 160-240637/4), (LCS 160-239422/2-A), (LCSD 160-239422/3-A) and (MB 160-239422/1-A)

Di-n-butyl phthalate was detected in method blank MB 160-239422/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 160-239422 and analytical batch 160-240637 recovered outside acceptance limits. The RPD failed between the LCS/LCSD. There was insufficient sample to perform a re-extraction; therefore, the data have been reported. (LCS 160-239422/2-A) and (LCSD 160-239422/3-A)

Surrogate recovery for the following samples and QC was outside of acceptance limits: (LCS 160-239422/2-A), (LCSD 160-239422/3-A) and (MB 160-239422/1-A). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Organic Prep

3510_8270_239422
Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 160-239422. An LCS/LCSD has been provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 03/10/2016 and 03/14/2016 and analyzed on 04/02/2016 and 04/06/2016.

Prep Batch: 240394
Due to difficult sample matrix a dilution was performed for the following samples: PZ-107-SS (160-16391-3) These dilutions were prepared as follows: 10mL to 50 mL

Analytical Batch: 243457
The low level check standard recovery associated with batch 160-243457 is outside the acceptance criteria for the following analyte(s): boron. The CCVL bracketing the samples were within acceptable QC criteria therefore original results will be reported. (CRI 160-243457/20)

The initial calibration verification (ICV) result for batch 160-243457 was above the upper control limit for phosphorus. Sample results were below the reporting limit, and have been reported as qualified data. (ICV 160-243457/18)

The following samples were diluted to bring the concentration of target analytes within the calibration range: PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2), PZ-107-SS (160-16391-3), (160-16391-H-1-B MS ^), (160-16391-H-1-C MSD), (160-16391-H-1-A SD ^), (160-16391-F-2-B MS ^), (160-16391-F-2-C MSD) and (160-16391-F-2-A SD ^). Elevated reporting limits (RLs) are provided.

Job ID: 160-16391-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

CaHard and Phosphorus were detected in method blank MB 160-239971/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Due to the high concentration of calcium, magnesium, sodium, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 160-239971 and analytical batch 160-243457 could not be evaluated for accuracy and precision. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details. The associated laboratory control sample (LCS) met acceptance criteria. (160-16391-H-1-B MS ^) and (160-16391-H-1-C MSD)

The method blank for preparation batch 160-240394 and analytical batch 160-243457 contained iron above reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank or lesser than the reporting limit. (MB 160-240394/1-A)

Analytical Batch: 244889
The following samples was diluted to bring the concentration of target analytes within the calibration range: PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2), PZ-107-SS (160-16391-3), (160-16391-H-1-B MS ^), (160-16391-H-1-C MSD), (160-16391-H-1-A SD ^), (160-16391-F-2-B MS ^), (160-16391-F-2-C MSD) and (160-16391-F-2-A SD ^). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 03/21/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 03/08/2016.

Analytical Batch: 239473
The following samples in TDS batch 239473 were diluted to bring the concentration of target analytes within the calibration range: PZ-101-SS (160-16391-1) and PZ-107-SS (160-16391-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS, ION CHROMATOGRAPHY
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for Anions, Ion Chromatography in accordance with EPA Method 300.0. The samples were analyzed on 03/26/2016.

Analytical Batch: 242201
The following samples in Anion batch 160-242201 were diluted to bring the concentrations of target analytes within the calibration range: PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3). Elevated reporting limits (RLs) are provided.

The following sample and sample duplicate in Anion batch 160-242201 have an RPD that is outside acceptance limits for Sulfate (30%). However, RPD is not applicable for values near the reporting limit. As the sample and duplicate are less than 5x the RL and have values within the RL of each other, the results are reported with this narration.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

AMMONIA
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for ammonia in accordance with EPA Method 350.1. The samples were analyzed on 03/29/2016.

Analytical Batch: 242771

Job ID: 160-16391-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

The following samples in Ammonia analytical batch 160-242771 were diluted to bring the concentrations of the target analyte within the calibration range: PZ-101-SS (160-16391-1) and PZ-107-SS (160-16391-3). Elevated reporting limits (RLs) are provided.

The following matrix spike (MS) in Ammonia analytical batch 160-242771 recovered outside control limits, at 114% recovery: (160-16344-D-1 MS). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

The following matrix spike (MS) in Ammonia analytical batch 160-242771 could not be evaluated for accuracy and precision, due to the high concentration of Ammonia in the sample, which required a dilution that diluted out the matrix spike. The associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN, NITRATE-NITRITE
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for Nitrogen, Nitrate-Nitrite in accordance with Method 353.1 Preserved. The samples were analyzed on 03/15/2016.

Analytical Batch: 240661
The matrix spike (MS) recoveries for the following samples in NO3-NO2 analytical batch 160-240661 were outside control limits: (160-16308-H-1 MS). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CHEMICAL OXYGEN DEMAND
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for chemical oxygen demand in accordance with EPA Method 410.4. The samples were prepared and analyzed on 03/09/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL ORGANIC CARBON
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for total organic carbon in accordance with EPA Method 415.1. The samples were analyzed on 03/23/2016 and 03/24/2016.

Analytical Batch: 242129
The following samples in TOC batch 160-242129 were diluted to bring the concentrations of the target analyte within the calibration range: PZ-101-SS (160-16391-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 (GFPC)-DISSOLVED
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were prepared on 03/08/2016 and analyzed on 03/30/2016.

Prep Batch: 239583
The following samples were prepared at a reduced aliquot due to sediment and discoloration in the sample: PZ-101-SS (160-16391-1).

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 (GFPC)
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for Radium-226 (GFPC) in

Job ID: 160-16391-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

accordance with EPA Method 903.0. The samples were prepared on 03/07/2016 and 03/08/2016 and analyzed on 03/29/2016 and 03/30/2016.

Prep Batch: 239412
The following samples were prepared at a reduced aliquot due to sediment and discoloration: PZ-107-SS (160-16391-3).

Prep Batch: 239587
The following samples were prepared at a reduced aliquot due to sediment and discoloration in the sample: PZ-102R-SS (160-16391-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228 (GFPC)-DISSOLVED
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for Radium-228 (GFPC) -Dissolved in accordance with EPA 904. The samples were prepared on 03/09/2016 and analyzed on 03/23/2016.

Prep Batch: 239662
Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

The following samples were prepared at a reduced aliquot due to sediment and discoloration in the sample: PZ-101-SS (160-16391-1).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228 (GFPC)
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for Radium-228 (GFPC) in accordance with EPA 904. The samples were prepared on 03/08/2016 and 03/09/2016 and analyzed on 03/22/2016 and 03/25/2016.

Prep Batch: 239469
The following samples were prepared at a reduced aliquot due to sediment and discoloration: PZ-107-SS (160-16391-3).

Prep Batch: 239659
The following samples were prepared at a reduced aliquot due to sediment and discoloration in the sample: PZ-102R-SS (160-16391-2).

Radium-228 was detected in method blank MB 160-239659/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRITIUM, TOTAL (LSC)
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for Tritium, Total (LSC) in accordance with USEPA 906.0. The samples were prepared on 03/25/2016 and analyzed on 03/27/2016 and 03/28/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC THORIUM (ALPHA SPECTROMETRY)
Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for Isotopic Thorium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 03/16/2016 and analyzed on 03/24/2016.

Prep Batch: 240784
Samples are yellow and smell like sulfur. A reduced aliquot was used to prevent matrix interference.
PZ-101-SS (160-16391-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 160-16391-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Samples PZ-101-SS (160-16391-1), PZ-102R-SS (160-16391-2) and PZ-107-SS (160-16391-3) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 03/16/2016 and analyzed on 03/23/2016.

Prep Batch: 240794

Samples are yellow and smell like sulfur. A reduced aliquot was used to prevent matrix interference.
PZ-101-SS (160-16391-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

Chain of Custody Record

testamerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: LYNN MCBERG	Lab PM: Lambert-Sykes, Chenise Y	Carrier Tracking No(s):	COC No: 160-3809-1856.1
Client Contact: Brenna McDonald	Phone: 573-453-4329	E-Mail: chenise.lambert-sykes@testamericainc.com		Page: Page 1 of 1
Company: Missouri Attorney General's Office				Job #:
Address: PO BOX 899	Due Date Requested:			
City: Jefferson City	TAT Requested (days):			
State, Zip: MO, 65102				
Phone: 573-368-2163(Tel)	PO #: Purchase Order not required			
Email: brenna.mcdonald@dnr.mo.gov	WO #:			
Project Name: Groundwater Samples	Project #: 16005117			
Site: Bridgeton Landfill	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1, 353.1_Pres, 410.4	160.1_Calcd, 300_ORGFM_28D	6010C, 7470A	415.1 - Total Organic Carbon	8260C - (MOD) OLM 4.2	8270D - (MOD) Appendix IX Semi-Volatiles	903.0, 904.0, A01R_Th, A01R_U	903.0, 904.0	906.0 - Tritium					Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	D	S	A	N	D	N	N						
PZ-101-SS	3/4/16	0908	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓						
PZ-102R-SS	3/4/16	1110	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓						
PZ-107-SS	3/4/16	1430	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓						
TRIPBLANK	3/4/16	0800	G	Water	N						✓										
				Water																	
				Water																	
				Water																	
				Water																	
160-16391 Chain of Custody																					

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 3/4/2016 1540	Company MDNR	Received by:	Date/Time: 3/4/16 1540	Company T4
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-16391-1

Login Number: 16391
List Number: 1
Creator: McKinney, Gerrod E

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
X	Surrogate is outside control limits
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SL
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SL
300.0	Anions, Ion Chromatography	MCAWW	TAL SL
6010C	Metals (ICP)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL SL
350.1	Nitrogen, Ammonia	MCAWW	TAL SL
353.1 Preserved	Nitrogen, Nitrate-Nitrite	MCAWW	TAL SL
410.4	COD	MCAWW	TAL SL
415.1	TOC	MCAWW	TAL SL
903.0	Radium-226 (GFPC)	EPA	TAL SL
904.0	Radium-228 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Thorium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-16391-1	PZ-101-SS	Water	03/04/16 09:08	03/04/16 15:40
160-16391-2	PZ-102R-SS	Water	03/04/16 11:10	03/04/16 15:40
160-16391-3	PZ-107-SS	Water	03/04/16 14:30	03/04/16 15:40
160-16391-4	TRIP BLANK	Water	03/04/16 08:00	03/04/16 15:40

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Client Sample ID: PZ-101-SS

Date Collected: 03/04/16 09:08
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 21:40	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 21:40	1
Acrolein	ND		50	3.1	ug/L			03/10/16 21:40	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 21:40	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 21:40	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 21:40	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 21:40	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 21:40	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 21:40	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 21:40	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 21:40	1
Chlorobenzene	**5.8**		5.0	0.38	ug/L			03/10/16 21:40	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 21:40	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 21:40	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 21:40	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 21:40	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 21:40	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 21:40	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 21:40	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 21:40	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 21:40	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 21:40	1
1,4-Dichlorobenzene	**0.70**	**J**	5.0	0.35	ug/L			03/10/16 21:40	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 21:40	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 21:40	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 21:40	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 21:40	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 21:40	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 21:40	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 21:40	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 21:40	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 21:40	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 21:40	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 21:40	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 21:40	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 21:40	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 21:40	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 21:40	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 21:40	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 21:40	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 21:40	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 21:40	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 21:40	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 21:40	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 21:40	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 21:40	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 21:40	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 21:40	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 21:40	1

Client Sample ID: PZ-101-SS

Date Collected: 03/04/16 09:08
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		5.0	1.0	ug/L			03/10/16 21:40	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 21:40	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 21:40	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 21:40	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 21:40	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 21:40	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 21:40	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 21:40	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 21:40	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 21:40	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 21:40	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 21:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*71 - 139*		*03/10/16 21:40*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 121*		*03/10/16 21:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*76 - 121*		*03/10/16 21:40*	*1*
Toluene-d8 (Surr)	*100*		*80 - 129*		*03/10/16 21:40*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Acenaphthylene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Acetophenone	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2-Acetylaminofluorene	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
4-Aminobiphenyl	ND		48	1.0	ug/L		03/07/16 16:12	03/16/16 01:10	1
Anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Benzo[a]anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Benzo[a]pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Benzo[b]fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Benzo[g,h,i]perylene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Benzo[k]fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Benzyl alcohol	ND		9.5	2.9	ug/L		03/07/16 16:12	03/16/16 01:10	1
Bis(2-chloroethoxy)methane	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Bis(2-chloroethyl)ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
bis(2 chloro-1-methylethyl) ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Bis(2-ethylhexyl) phthalate	ND	*	9.5	1.8	ug/L		03/07/16 16:12	03/16/16 01:10	1
4-Bromophenyl phenyl ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Butyl benzyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
4-Chloroaniline	ND	*	9.5	1.9	ug/L		03/07/16 16:12	03/16/16 01:10	1
Chlorobenzilate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
4-Chloro-3-methylphenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2-Chloronaphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2-Chlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
4-Chlorophenyl phenyl ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Chrysene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Diallate	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 01:10	1
Dibenz(a,h)anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Dibenzofuran	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
3,3'-Dichlorobenzidine	ND	*	48	1.2	ug/L		03/07/16 16:12	03/16/16 01:10	1

Client Sample ID: PZ-101-SS

Date Collected: 03/04/16 09:08
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2,6-Dichlorophenol	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Diethyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Dimethoate	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
3,3'-Dimethylbenzidine	ND		48	2.5	ug/L		03/07/16 16:12	03/16/16 01:10	1
2,4-Dimethylphenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Dimethyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Di-n-butyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
1,3-Dinitrobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
1,4-Dinitrobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
4,6-Dinitro-2-methylphenol	ND	*	9.5	1.2	ug/L		03/07/16 16:12	03/16/16 01:10	1
2,4-Dinitrophenol	ND		48	1.9	ug/L		03/07/16 16:12	03/16/16 01:10	1
2,4-Dinitrotoluene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2,6-Dinitrotoluene	ND	*	9.5	2.1	ug/L		03/07/16 16:12	03/16/16 01:10	1
Di-n-octyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Dinoseb	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 01:10	1
Diphenylamine	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Disulfoton	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Ethyl methanesulfonate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Famphur	ND		95	1.6	ug/L		03/07/16 16:12	03/16/16 01:10	1
Fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Fluorene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Hexachlorobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Hexachlorobutadiene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Hexachlorocyclopentadiene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Hexachloroethane	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Hexachlorophene	ND		240	9.5	ug/L		03/07/16 16:12	03/16/16 01:10	1
Hexachloropropene	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Indeno[1,2,3-cd]pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Isodrin	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Isophorone	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Isosafrole	ND		19	4.8	ug/L		03/07/16 16:12	03/16/16 01:10	1
Kepone	ND		95	19	ug/L		03/07/16 16:12	03/16/16 01:10	1
Methapyrilene	ND		48	1.2	ug/L		03/07/16 16:12	03/16/16 01:10	1
3-Methylcholanthrene	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Methyl methanesulfonate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2-Methylnaphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Methyl parathion	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2-Methylphenol	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
3 & 4 Methylphenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 01:10	1
Naphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
1,4-Naphthoquinone	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
1-Naphthylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2-Naphthylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2-Nitroaniline	ND		9.5	1.0	ug/L		03/07/16 16:12	03/16/16 01:10	1
3-Nitroaniline	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
4-Nitroaniline	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Nitrobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Client Sample ID: PZ-101-SS

Date Collected: 03/04/16 09:08
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
5-Nitro-o-toluidine	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2-Nitrophenol	ND	*	9.5	1.4	ug/L		03/07/16 16:12	03/16/16 01:10	1
4-Nitrophenol	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 01:10	1
N-Nitrosodiethylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
N-Nitrosodimethylamine	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 01:10	1
N-Nitrosodi-n-butylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
N-Nitrosodi-n-propylamine	ND	*	9.5	1.4	ug/L		03/07/16 16:12	03/16/16 01:10	1
N-Nitrosomethylethylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
N-Nitrosomorpholine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
N-Nitrosopiperidine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
N-Nitrosopyrrolidine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
o,o',o''-Triethylphosphorothioate	ND		48	1.1	ug/L		03/07/16 16:12	03/16/16 01:10	1
o-Toluidine	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Parathion	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
p-Dimethylamino azobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Pentachlorobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Pentachloronitrobenzene	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Pentachlorophenol	ND	*	48	1.2	ug/L		03/07/16 16:12	03/16/16 01:10	1
Phenacetin	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Phenanthrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Phenol	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 01:10	1
Phorate	ND		48	1.9	ug/L		03/07/16 16:12	03/16/16 01:10	1
p-Phenylene diamine	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Pronamide	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Safrole	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
1,2,4,5-Tetrachlorobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2,3,4,6-Tetrachlorophenol	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
Thionazin	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
1,2,4-Trichlorobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2,4,5-Trichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
2,4,6-Trichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1
1,3,5-Trinitrobenzene	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*92*		*43 - 108*	*03/07/16 16:12*	*03/16/16 01:10*	*1*
2-Fluorophenol (Surr)	*32*		*15 - 59*	*03/07/16 16:12*	*03/16/16 01:10*	*1*
Nitrobenzene-d5 (Surr)	*87*		*50 - 101*	*03/07/16 16:12*	*03/16/16 01:10*	*1*
Phenol-d5 (Surr)	*18*		*10 - 50*	*03/07/16 16:12*	*03/16/16 01:10*	*1*
Terphenyl-d14 (Surr)	*52*		*21 - 97*	*03/07/16 16:12*	*03/16/16 01:10*	*1*
2,4,6-Tribromophenol (Surr)	*103*		*37 - 120*	*03/07/16 16:12*	*03/16/16 01:10*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**0.66**		0.50	0.050	mg/L			03/26/16 01:45	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**2.2**		2.0	0.20	mg/L			03/26/16 02:00	20

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Client Sample ID: PZ-101-SS

Date Collected: 03/04/16 09:08
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	210		40	4.0	mg/L			03/26/16 02:15	200

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		50	19	ug/L		03/10/16 12:24	04/02/16 04:09	5
Arsenic	31	J	50	8.9	ug/L		03/10/16 12:24	04/06/16 19:50	5
Barium	500		250	11	ug/L		03/10/16 12:24	04/02/16 04:09	5
Beryllium	ND		25	1.4	ug/L		03/10/16 12:24	04/02/16 04:09	5
Boron	760	^	250	36	ug/L		03/10/16 12:24	04/02/16 04:09	5
Cadmium	ND		25	1.7	ug/L		03/10/16 12:24	04/02/16 04:09	5
CaHard	440000	B	5000	270	ug/L		03/10/16 12:24	04/02/16 04:09	5
Calcium	180000		5000	270	ug/L		03/10/16 12:24	04/02/16 04:09	5
Chromium	ND		50	17	ug/L		03/10/16 12:24	04/06/16 19:50	5
Cobalt	ND		250	14	ug/L		03/10/16 12:24	04/02/16 04:09	5
Copper	ND		130	11	ug/L		03/10/16 12:24	04/02/16 04:09	5
Iron	2100		500	64	ug/L		03/10/16 12:24	04/02/16 04:09	5
Lead	ND		50	3.0	ug/L		03/10/16 12:24	04/02/16 04:09	5
Magnesium	95		5.0	0.25	mg/L		03/10/16 12:24	04/02/16 04:09	5
Manganese	43	J	75	5.0	ug/L		03/10/16 12:24	04/02/16 04:09	5
MgHard	390000		5000	250	ug/L		03/10/16 12:24	04/02/16 04:09	5
Nickel	0.015	J	0.20	0.013	mg/L		03/10/16 12:24	04/02/16 04:09	5
Phosphorus	ND	^	1300	69	ug/L		03/10/16 12:24	04/02/16 04:09	5
Selenium	ND		75	10	ug/L		03/10/16 12:24	04/02/16 04:09	5
Silver	ND		100	5.0	ug/L		03/10/16 12:24	04/02/16 04:09	5
Sodium	100000		5000	530	ug/L		03/10/16 12:24	04/02/16 04:09	5
Thallium	ND		100	12	ug/L		03/10/16 12:24	04/02/16 04:09	5
Total Hardness	830000		25000	8700	ug/L		03/10/16 12:24	04/02/16 04:09	5
Vanadium	27	J	250	22	ug/L		03/10/16 12:24	04/02/16 04:09	5
Zinc	ND		100	42	ug/L		03/10/16 12:24	04/02/16 04:09	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 19:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite	ND		0.050	0.0047	mg/L			03/15/16 17:50	1
Chemical Oxygen Demand	100		20	6.5	mg/L		03/09/16 09:10	03/09/16 13:45	1

General Chemistry - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	1100		10	7.0	mg/L			03/08/16 10:41	2
Ammonia	11	F1	0.50	0.083	mg/L			03/29/16 16:54	10
Total Organic Carbon	28		2.0	1.4	mg/L			03/24/16 12:19	2

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	14.7		0.554	1.43	1.00	0.0666	pCi/L	03/08/16 13:37	03/30/16 07:31	1

Client Sample ID: PZ-101-SS

Date Collected: 03/04/16 09:08
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-1

Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110	03/08/16 13:37	03/30/16 07:31	1

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	13.9		0.680	1.42	1.00	0.135	pCi/L	03/08/16 12:46	03/30/16 07:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110	03/08/16 12:46	03/30/16 07:57	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.08		0.377	0.423	1.00	0.417	pCi/L	03/09/16 08:29	03/25/16 12:31	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110	03/09/16 08:29	03/25/16 12:31	1
Y Carrier	84.5		40 - 110	03/09/16 08:29	03/25/16 12:31	1

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.05		0.579	0.609	1.00	0.764	pCi/L	03/09/16 08:31	03/23/16 12:17	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110	03/09/16 08:31	03/23/16 12:17	1
Y Carrier	81.9		40 - 110	03/09/16 08:31	03/23/16 12:17	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	5690		675	841	500	439	pCi/L	03/25/16 10:51	03/27/16 23:36	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.569		0.258	0.263	1.00	0.233	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Thorium-229	85.1		30 - 110	03/16/16 09:50	03/24/16 18:20	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0628	U	0.123	0.124	1.00	0.231	pCi/L	03/16/16 09:50	03/23/16 12:16	1
Uranium-235/236	0.0234	U	0.0993	0.0993	1.00	0.231	pCi/L	03/16/16 09:50	03/23/16 12:16	1

Client Sample ID: PZ-101-SS

Lab Sample ID: 160-16391-1
Date Collected: 03/04/16 09:08
Matrix: Water
Date Received: 03/04/16 15:40

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-238	0.194		0.155	0.156	1.00	0.185	pCi/L	03/16/16 09:50	03/23/16 12:16	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*88.5*		*30 - 110*	*03/16/16 09:50*	*03/23/16 12:16*	*1*

Client Sample ID: PZ-102R-SS

Lab Sample ID: 160-16391-2
Date Collected: 03/04/16 11:10
Matrix: Water
Date Received: 03/04/16 15:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 23:22	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 23:22	1
Acrolein	ND		50	3.1	ug/L			03/10/16 23:22	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 23:22	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 23:22	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 23:22	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 23:22	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 23:22	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 23:22	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 23:22	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 23:22	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 23:22	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 23:22	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 23:22	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 23:22	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 23:22	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 23:22	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 23:22	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 23:22	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 23:22	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 23:22	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 23:22	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 23:22	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 23:22	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 23:22	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 23:22	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 23:22	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 23:22	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 23:22	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 23:22	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 23:22	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 23:22	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 23:22	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 23:22	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 23:22	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 23:22	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 23:22	1

Client Sample ID: PZ-102R-SS

Date Collected: 03/04/16 11:10
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl chloride	ND		10	0.55	ug/L			03/10/16 23:22	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 23:22	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 23:22	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 23:22	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 23:22	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 23:22	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 23:22	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 23:22	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 23:22	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 23:22	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 23:22	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 23:22	1
Toluene	ND		5.0	1.0	ug/L			03/10/16 23:22	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 23:22	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 23:22	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 23:22	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 23:22	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 23:22	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 23:22	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 23:22	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 23:22	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 23:22	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 23:22	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 23:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*71 - 139*		*03/10/16 23:22*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 121*		*03/10/16 23:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*76 - 121*		*03/10/16 23:22*	*1*
Toluene-d8 (Surr)	*103*		*80 - 129*		*03/10/16 23:22*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Acenaphthylene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Acetophenone	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2-Acetylaminofluorene	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
4-Aminobiphenyl	ND		48	1.0	ug/L		03/07/16 16:12	03/16/16 01:44	1
Anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Benzo[a]anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Benzo[a]pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Benzo[b]fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Benzo[g,h,i]perylene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Benzo[k]fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Benzyl alcohol	ND		9.5	2.9	ug/L		03/07/16 16:12	03/16/16 01:44	1
Bis(2-chloroethoxy)methane	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Bis(2-chloroethyl)ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
bis(2 chloro-1-methylethyl) ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Bis(2-ethylhexyl) phthalate	ND	*	9.5	1.8	ug/L		03/07/16 16:12	03/16/16 01:44	1
4-Bromophenyl phenyl ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1

Client Sample ID: PZ-102R-SS

Date Collected: 03/04/16 11:10
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-2

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butyl benzyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
4-Chloroaniline	ND	*	9.5	1.9	ug/L		03/07/16 16:12	03/16/16 01:44	1
Chlorobenzilate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
4-Chloro-3-methylphenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2-Chloronaphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2-Chlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
4-Chlorophenyl phenyl ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Chrysene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Diallate	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 01:44	1
Dibenz(a,h)anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Dibenzofuran	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
3,3'-Dichlorobenzidine	ND	*	48	1.2	ug/L		03/07/16 16:12	03/16/16 01:44	1
2,4-Dichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2,6-Dichlorophenol	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Diethyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Dimethoate	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
3,3'-Dimethylbenzidine	ND		48	2.5	ug/L		03/07/16 16:12	03/16/16 01:44	1
2,4-Dimethylphenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Dimethyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Di-n-butyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
1,3-Dinitrobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
1,4-Dinitrobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
4,6-Dinitro-2-methylphenol	ND	*	9.5	1.2	ug/L		03/07/16 16:12	03/16/16 01:44	1
2,4-Dinitrophenol	ND		48	1.9	ug/L		03/07/16 16:12	03/16/16 01:44	1
2,4-Dinitrotoluene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2,6-Dinitrotoluene	ND	*	9.5	2.1	ug/L		03/07/16 16:12	03/16/16 01:44	1
Di-n-octyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Dinoseb	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 01:44	1
Diphenylamine	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Disulfoton	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Ethyl methanesulfonate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Famphur	ND		95	1.6	ug/L		03/07/16 16:12	03/16/16 01:44	1
Fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Fluorene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Hexachlorobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Hexachlorobutadiene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Hexachlorocyclopentadiene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Hexachloroethane	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Hexachlorophene	ND		240	9.5	ug/L		03/07/16 16:12	03/16/16 01:44	1
Hexachloropropene	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Indeno[1,2,3-cd]pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Isodrin	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Isophorone	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Isosafrole	ND		19	4.8	ug/L		03/07/16 16:12	03/16/16 01:44	1
Kepone	ND		95	19	ug/L		03/07/16 16:12	03/16/16 01:44	1
Methapyrilene	ND		48	1.2	ug/L		03/07/16 16:12	03/16/16 01:44	1
3-Methylcholanthrene	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Methyl methanesulfonate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Client Sample ID: PZ-102R-SS

Date Collected: 03/04/16 11:10
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-2

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Methyl parathion	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2-Methylphenol	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
3 & 4 Methylphenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 01:44	1
Naphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
1,4-Naphthoquinone	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
1-Naphthylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2-Naphthylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2-Nitroaniline	ND		9.5	1.0	ug/L		03/07/16 16:12	03/16/16 01:44	1
3-Nitroaniline	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
4-Nitroaniline	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Nitrobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
5-Nitro-o-toluidine	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2-Nitrophenol	ND	*	9.5	1.4	ug/L		03/07/16 16:12	03/16/16 01:44	1
4-Nitrophenol	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 01:44	1
N-Nitrosodiethylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
N-Nitrosodimethylamine	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 01:44	1
N-Nitrosodi-n-butylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
N-Nitrosodi-n-propylamine	ND	*	9.5	1.4	ug/L		03/07/16 16:12	03/16/16 01:44	1
N-Nitrosomethylethylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
N-Nitrosomorpholine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
N-Nitrosopiperidine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
N-Nitrosopyrrolidine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
o,o',o''-Triethylphosphorothioate	ND		48	1.1	ug/L		03/07/16 16:12	03/16/16 01:44	1
o-Toluidine	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Parathion	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
p-Dimethylamino azobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Pentachlorobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Pentachloronitrobenzene	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Pentachlorophenol	ND	*	48	1.2	ug/L		03/07/16 16:12	03/16/16 01:44	1
Phenacetin	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Phenanthrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Phenol	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 01:44	1
Phorate	ND		48	1.9	ug/L		03/07/16 16:12	03/16/16 01:44	1
p-Phenylene diamine	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Pronamide	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Safrole	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
1,2,4,5-Tetrachlorobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2,3,4,6-Tetrachlorophenol	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
Thionazin	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
1,2,4-Trichlorobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2,4,5-Trichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
2,4,6-Trichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1
1,3,5-Trinitrobenzene	ND		48	0.95	ug/L		03/07/16 16:12	03/16/16 01:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*98*		*43 - 108*	*03/07/16 16:12*	*03/16/16 01:44*	*1*
2-Fluorophenol (Surr)	*31*		*15 - 59*	*03/07/16 16:12*	*03/16/16 01:44*	*1*
Nitrobenzene-d5 (Surr)	*90*		*50 - 101*	*03/07/16 16:12*	*03/16/16 01:44*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Client Sample ID: PZ-102R-SS

Date Collected: 03/04/16 11:10
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-2

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5 (Surr)	*17*		*10 - 50*	*03/07/16 16:12*	*03/16/16 01:44*	*1*
Terphenyl-d14 (Surr)	*63*		*21 - 97*	*03/07/16 16:12*	*03/16/16 01:44*	*1*
2,4,6-Tribromophenol (Surr)	*107*		*37 - 120*	*03/07/16 16:12*	*03/16/16 01:44*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.60**		0.10	0.010	mg/L			03/26/16 04:29	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**64**		10	1.0	mg/L			03/26/16 04:44	20
Chloride	**9.5**		4.0	0.40	mg/L			03/26/16 04:44	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		50	19	ug/L		03/14/16 13:50	04/02/16 01:47	5
Arsenic	ND		50	8.9	ug/L		03/14/16 13:50	04/06/16 18:34	5
Barium	**76**	**J**	250	11	ug/L		03/14/16 13:50	04/02/16 01:47	5
Beryllium	ND		25	1.4	ug/L		03/14/16 13:50	04/02/16 01:47	5
Boron	**150**	**J ^**	250	36	ug/L		03/14/16 13:50	04/02/16 01:47	5
Cadmium	ND		25	1.7	ug/L		03/14/16 13:50	04/02/16 01:47	5
CaHard	**330000**	**B**	5000	270	ug/L		03/14/16 13:50	04/02/16 01:47	5
Calcium	**130000**		5000	270	ug/L		03/14/16 13:50	04/02/16 01:47	5
Chromium	ND		50	17	ug/L		03/14/16 13:50	04/06/16 18:34	5
Cobalt	ND		250	14	ug/L		03/14/16 13:50	04/02/16 01:47	5
Copper	ND		130	11	ug/L		03/14/16 13:50	04/02/16 01:47	5
Iron	**2000**	**B**	500	64	ug/L		03/14/16 13:50	04/02/16 01:47	5
Lead	ND		50	3.0	ug/L		03/14/16 13:50	04/02/16 01:47	5
Magnesium	**45**		5.0	0.25	mg/L		03/14/16 13:50	04/02/16 01:47	5
Manganese	**47**	**J**	75	5.0	ug/L		03/14/16 13:50	04/02/16 01:47	5
MgHard	**180000**	**B**	5000	250	ug/L		03/14/16 13:50	04/02/16 01:47	5
Nickel	ND		0.20	0.013	mg/L		03/14/16 13:50	04/02/16 01:47	5
Phosphorus	ND	^	1300	69	ug/L		03/14/16 13:50	04/02/16 01:47	5
Selenium	ND		75	10	ug/L		03/14/16 13:50	04/02/16 01:47	5
Silver	ND		100	5.0	ug/L		03/14/16 13:50	04/02/16 01:47	5
Sodium	**21000**		5000	530	ug/L		03/14/16 13:50	04/02/16 01:47	5
Thallium	**16**	**J**	100	12	ug/L		03/14/16 13:50	04/02/16 01:47	5
Total Hardness	**510000**		25000	8700	ug/L		03/14/16 13:50	04/02/16 01:47	5
Vanadium	ND		250	22	ug/L		03/14/16 13:50	04/02/16 01:47	5
Zinc	**44**	**J**	100	42	ug/L		03/14/16 13:50	04/02/16 01:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 20:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	**530**		5.0	3.5	mg/L			03/08/16 10:41	1
Ammonia	**0.11**		0.050	0.0083	mg/L			03/29/16 16:58	1
Nitrate/Nitrite	**0.014**	**J**	0.050	0.0047	mg/L			03/15/16 17:52	1

Client Sample ID: PZ-102R-SS

Date Collected: 03/04/16 11:10
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-2

Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	6.5	mg/L		03/09/16 09:10	03/09/16 13:45	1
Total Organic Carbon	**0.95**	**J**	1.0	0.72	mg/L			03/23/16 23:03	1

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.74**		0.301	0.339	1.00	0.229	pCi/L	03/08/16 13:37	03/30/16 07:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.0*		*40 - 110*	*03/08/16 13:37*	*03/30/16 07:31*	*1*

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.18**		0.145	0.180	1.00	0.0582	pCi/L	03/08/16 12:46	03/30/16 07:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.4*		*40 - 110*	*03/08/16 12:46*	*03/30/16 07:57*	*1*

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.655	U	0.551	0.555	1.00	0.884	pCi/L	03/09/16 08:29	03/25/16 12:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.0*		*40 - 110*	*03/09/16 08:29*	*03/25/16 12:31*	*1*
Y Carrier	*90.5*		*40 - 110*	*03/09/16 08:29*	*03/25/16 12:31*	*1*

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.536**		0.237	0.242	1.00	0.334	pCi/L	03/09/16 08:31	03/23/16 12:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.4*		*40 - 110*	*03/09/16 08:31*	*03/23/16 12:17*	*1*
Y Carrier	*84.1*		*40 - 110*	*03/09/16 08:31*	*03/23/16 12:17*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-10.8	U	220	220	500	407	pCi/L	03/25/16 10:51	03/27/16 23:59	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	**0.246**		0.107	0.109	1.00	0.0853	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Client Sample ID: PZ-102R-SS — Lab Sample ID: 160-16391-2

Date Collected: 03/04/16 11:10 — **Matrix: Water**
Date Received: 03/04/16 15:40

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Thorium-229	80.8		30 - 110	03/16/16 09:50	03/24/16 18:20	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	2.57		0.306	0.375	1.00	0.0667	pCi/L	03/16/16 09:50	03/23/16 12:16	1
Uranium-235/236	0.0787		0.0595	0.0599	1.00	0.0337	pCi/L	03/16/16 09:50	03/23/16 12:16	1
Uranium-238	1.62		0.243	0.279	1.00	0.0665	pCi/L	03/16/16 09:50	03/23/16 12:16	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	99.4		30 - 110	03/16/16 09:50	03/23/16 12:16	1

Client Sample ID: PZ-107-SS — Lab Sample ID: 160-16391-3

Date Collected: 03/04/16 14:30 — **Matrix: Water**
Date Received: 03/04/16 15:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 23:47	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 23:47	1
Acrolein	ND		50	3.1	ug/L			03/10/16 23:47	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 23:47	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 23:47	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 23:47	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 23:47	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 23:47	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 23:47	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 23:47	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 23:47	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 23:47	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 23:47	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 23:47	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 23:47	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 23:47	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 23:47	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 23:47	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 23:47	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 23:47	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 23:47	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 23:47	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 23:47	1
Dichlorodifluoromethane	22		10	0.45	ug/L			03/10/16 23:47	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 23:47	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 23:47	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 23:47	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 23:47	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 23:47	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 23:47	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 23:47	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 23:47	1

Client Sample ID: PZ-107-SS

Date Collected: 03/04/16 14:30
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 23:47	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 23:47	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 23:47	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 23:47	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 23:47	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 23:47	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 23:47	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 23:47	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 23:47	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 23:47	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 23:47	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 23:47	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 23:47	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 23:47	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 23:47	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 23:47	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 23:47	1
Toluene	ND		5.0	1.0	ug/L			03/10/16 23:47	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 23:47	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 23:47	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 23:47	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 23:47	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 23:47	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 23:47	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 23:47	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 23:47	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 23:47	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 23:47	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*71 - 139*		*03/10/16 23:47*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 121*		*03/10/16 23:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*76 - 121*		*03/10/16 23:47*	*1*
Toluene-d8 (Surr)	*98*		*80 - 129*		*03/10/16 23:47*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Acenaphthylene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Acetophenone	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2-Acetylaminofluorene	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
4-Aminobiphenyl	ND		47	0.99	ug/L		03/07/16 16:12	03/16/16 02:17	1
Anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Benzo[a]anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Benzo[a]pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Benzo[b]fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Benzo[g,h,i]perylene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Benzo[k]fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Benzyl alcohol	ND		9.5	2.8	ug/L		03/07/16 16:12	03/16/16 02:17	1

Client Sample ID: PZ-107-SS

Date Collected: 03/04/16 14:30
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Bis(2-chloroethyl)ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
bis(2 chloro-1-methylethyl) ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Bis(2-ethylhexyl) phthalate	ND	*	9.5	1.8	ug/L		03/07/16 16:12	03/16/16 02:17	1
4-Bromophenyl phenyl ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Butyl benzyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
4-Chloroaniline	ND	*	9.5	1.9	ug/L		03/07/16 16:12	03/16/16 02:17	1
Chlorobenzilate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
4-Chloro-3-methylphenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2-Chloronaphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2-Chlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
4-Chlorophenyl phenyl ether	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Chrysene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Diallate	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 02:17	1
Dibenz(a,h)anthracene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Dibenzofuran	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
3,3'-Dichlorobenzidine	ND	*	47	1.2	ug/L		03/07/16 16:12	03/16/16 02:17	1
2,4-Dichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2,6-Dichlorophenol	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Diethyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Dimethoate	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
3,3'-Dimethylbenzidine	ND		47	2.5	ug/L		03/07/16 16:12	03/16/16 02:17	1
2,4-Dimethylphenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Dimethyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Di-n-butyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
1,3-Dinitrobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
1,4-Dinitrobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
4,6-Dinitro-2-methylphenol	ND	*	9.5	1.2	ug/L		03/07/16 16:12	03/16/16 02:17	1
2,4-Dinitrophenol	ND		47	1.9	ug/L		03/07/16 16:12	03/16/16 02:17	1
2,4-Dinitrotoluene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2,6-Dinitrotoluene	ND	*	9.5	2.0	ug/L		03/07/16 16:12	03/16/16 02:17	1
Di-n-octyl phthalate	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Dinoseb	ND		19	1.9	ug/L		03/07/16 16:12	03/16/16 02:17	1
Diphenylamine	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Disulfoton	ND		47	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Ethyl methanesulfonate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Famphur	ND		95	1.6	ug/L		03/07/16 16:12	03/16/16 02:17	1
Fluoranthene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Fluorene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Hexachlorobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Hexachlorobutadiene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Hexachlorocyclopentadiene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Hexachloroethane	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Hexachlorophene	ND		240	9.5	ug/L		03/07/16 16:12	03/16/16 02:17	1
Hexachloropropene	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Indeno[1,2,3-cd]pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Isodrin	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Isophorone	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1

Client Sample ID: PZ-107-SS

Date Collected: 03/04/16 14:30
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isosafrole	ND		19	4.7	ug/L		03/07/16 16:12	03/16/16 02:17	1
Kepone	ND		95	19	ug/L		03/07/16 16:12	03/16/16 02:17	1
Methapyrilene	ND		47	1.2	ug/L		03/07/16 16:12	03/16/16 02:17	1
3-Methylcholanthrene	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Methyl methanesulfonate	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2-Methylnaphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Methyl parathion	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2-Methylphenol	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
3 & 4 Methylphenol	ND	*	19	1.9	ug/L		03/07/16 16:12	03/16/16 02:17	1
Naphthalene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
1,4-Naphthoquinone	ND		47	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
1-Naphthylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2-Naphthylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2-Nitroaniline	ND		9.5	1.0	ug/L		03/07/16 16:12	03/16/16 02:17	1
3-Nitroaniline	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
4-Nitroaniline	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Nitrobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
5-Nitro-o-toluidine	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2-Nitrophenol	ND	*	9.5	1.4	ug/L		03/07/16 16:12	03/16/16 02:17	1
4-Nitrophenol	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 02:17	1
N-Nitrosodiethylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
N-Nitrosodimethylamine	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 02:17	1
N-Nitrosodi-n-butylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
N-Nitrosodi-n-propylamine	ND	*	9.5	1.4	ug/L		03/07/16 16:12	03/16/16 02:17	1
N-Nitrosomethylethylamine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
N-Nitrosomorpholine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
N-Nitrosopiperidine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
N-Nitrosopyrrolidine	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
o,o',o''-Triethylphosphorothioate	ND		47	1.1	ug/L		03/07/16 16:12	03/16/16 02:17	1
o-Toluidine	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Parathion	ND		47	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
p-Dimethylamino azobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Pentachlorobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Pentachloronitrobenzene	ND		47	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Pentachlorophenol	ND	*	47	1.2	ug/L		03/07/16 16:12	03/16/16 02:17	1
Phenacetin	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Phenanthrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Phenol	ND		9.5	1.9	ug/L		03/07/16 16:12	03/16/16 02:17	1
Phorate	ND		47	1.9	ug/L		03/07/16 16:12	03/16/16 02:17	1
p-Phenylene diamine	ND		95	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Pronamide	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Pyrene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Safrole	ND		19	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
1,2,4,5-Tetrachlorobenzene	ND		9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2,3,4,6-Tetrachlorophenol	ND		47	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
Thionazin	ND		47	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
1,2,4-Trichlorobenzene	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2,4,5-Trichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1
2,4,6-Trichlorophenol	ND	*	9.5	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Client Sample ID: PZ-107-SS

Date Collected: 03/04/16 14:30
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		47	0.95	ug/L		03/07/16 16:12	03/16/16 02:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*91*		*43 - 108*	*03/07/16 16:12*	*03/16/16 02:17*	*1*
2-Fluorophenol (Surr)	*31*		*15 - 59*	*03/07/16 16:12*	*03/16/16 02:17*	*1*
Nitrobenzene-d5 (Surr)	*85*		*50 - 101*	*03/07/16 16:12*	*03/16/16 02:17*	*1*
Phenol-d5 (Surr)	*18*		*10 - 50*	*03/07/16 16:12*	*03/16/16 02:17*	*1*
Terphenyl-d14 (Surr)	*56*		*21 - 97*	*03/07/16 16:12*	*03/16/16 02:17*	*1*
2,4,6-Tribromophenol (Surr)	*103*		*37 - 120*	*03/07/16 16:12*	*03/16/16 02:17*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.18**		0.10	0.010	mg/L			03/26/16 05:14	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**51**		10	1.0	mg/L			03/26/16 05:29	20

Method: 300.0 - Anions, Ion Chromatography - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**320**		40	4.0	mg/L			03/26/16 05:44	200

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		250	94	ug/L		03/14/16 13:50	04/02/16 02:04	5
Arsenic	**95**	**J**	250	45	ug/L		03/14/16 13:50	04/06/16 18:52	5
Barium	**3400**		1300	53	ug/L		03/14/16 13:50	04/02/16 02:04	5
Beryllium	ND		130	7.1	ug/L		03/14/16 13:50	04/02/16 02:04	5
Boron	**1800**	**^**	1300	180	ug/L		03/14/16 13:50	04/02/16 02:04	5
Cadmium	ND		130	8.4	ug/L		03/14/16 13:50	04/02/16 02:04	5
CaHard	**3400000**	**B**	25000	1400	ug/L		03/14/16 13:50	04/02/16 02:04	5
Calcium	**1400000**		25000	1400	ug/L		03/14/16 13:50	04/02/16 02:04	5
Chromium	ND		250	84	ug/L		03/14/16 13:50	04/06/16 18:52	5
Cobalt	ND		1300	68	ug/L		03/14/16 13:50	04/02/16 02:04	5
Copper	ND		630	53	ug/L		03/14/16 13:50	04/02/16 02:04	5
Iron	**32000**	**B**	2500	320	ug/L		03/14/16 13:50	04/02/16 02:04	5
Lead	ND		250	15	ug/L		03/14/16 13:50	04/02/16 02:04	5
Magnesium	**620**		25	1.3	mg/L		03/14/16 13:50	04/02/16 02:04	5
Manganese	**580**		380	25	ug/L		03/14/16 13:50	04/02/16 02:04	5
MgHard	**2600000**	**B**	25000	1300	ug/L		03/14/16 13:50	04/02/16 02:04	5
Nickel	**0.25**	**J**	1.0	0.064	mg/L		03/14/16 13:50	04/02/16 02:04	5
Phosphorus	**830**	**J ^ B**	6300	350	ug/L		03/14/16 13:50	04/02/16 02:04	5
Selenium	ND		380	52	ug/L		03/14/16 13:50	04/02/16 02:04	5
Silver	ND		500	25	ug/L		03/14/16 13:50	04/02/16 02:04	5
Sodium	**530000**		25000	2600	ug/L		03/14/16 13:50	04/02/16 02:04	5
Thallium	**70**	**J**	500	60	ug/L		03/14/16 13:50	04/02/16 02:04	5
Total Hardness	**5900000**		130000	44000	ug/L		03/14/16 13:50	04/02/16 02:04	5
Vanadium	ND		1300	110	ug/L		03/14/16 13:50	04/02/16 02:04	5
Zinc	ND		500	210	ug/L		03/14/16 13:50	04/02/16 02:04	5

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Client Sample ID: PZ-107-SS

Date Collected: 03/04/16 14:30
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-3

Matrix: Water

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 20:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite	ND		0.050	0.0047	mg/L			03/15/16 17:53	1
Chemical Oxygen Demand	**56**		20	6.5	mg/L		03/09/16 09:10	03/09/16 13:45	1
Total Organic Carbon	**17**		1.0	0.72	mg/L			03/23/16 23:16	1

General Chemistry - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	**1500**		10	7.0	mg/L			03/08/16 10:41	2
Ammonia	**3.1**		0.25	0.041	mg/L			03/29/16 17:00	5

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**5.03**		0.431	0.625	1.00	0.116	pCi/L	03/07/16 15:25	03/29/16 06:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/07/16 15:25*	*03/29/16 06:33*	*1*

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**3.99**		0.260	0.444	1.00	0.0629	pCi/L	03/08/16 12:46	03/30/16 07:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/08/16 12:46*	*03/30/16 07:57*	*1*

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.34**		0.479	0.495	1.00	0.644	pCi/L	03/08/16 10:30	03/22/16 17:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/08/16 10:30*	*03/22/16 17:30*	*1*
Y Carrier	*83.0*		*40 - 110*	*03/08/16 10:30*	*03/22/16 17:30*	*1*

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.56**		0.299	0.331	1.00	0.302	pCi/L	03/09/16 08:31	03/23/16 12:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*03/09/16 08:31*	*03/23/16 12:17*	*1*
Y Carrier	*84.1*		*40 - 110*	*03/09/16 08:31*	*03/23/16 12:17*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Client Sample ID: PZ-107-SS

Lab Sample ID: 160-16391-3
Date Collected: 03/04/16 14:30
Matrix: Water
Date Received: 03/04/16 15:40

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	1190		364	379	500	422	pCi/L	03/25/16 10:51	03/28/16 00:22	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.225		0.0999	0.102	1.00	0.0850	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Thorium-229	*93.5*		*30 - 110*	*03/16/16 09:50*	*03/24/16 18:20*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.139		0.0743	0.0752	1.00	0.0527	pCi/L	03/16/16 09:50	03/23/16 12:16	1
Uranium-235/236	0.0138	U	0.0364	0.0364	1.00	0.0780	pCi/L	03/16/16 09:50	03/23/16 12:16	1
Uranium-238	0.154		0.0793	0.0803	1.00	0.0626	pCi/L	03/16/16 09:50	03/23/16 12:16	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*90.9*		*30 - 110*	*03/16/16 09:50*	*03/23/16 12:16*	*1*

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-16391-4
Date Collected: 03/04/16 08:00
Matrix: Water
Date Received: 03/04/16 15:40

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 18:41	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 18:41	1
Acrolein	ND		50	3.1	ug/L			03/10/16 18:41	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 18:41	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 18:41	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 18:41	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 18:41	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 18:41	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 18:41	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 18:41	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 18:41	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 18:41	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 18:41	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 18:41	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 18:41	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 18:41	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 18:41	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 18:41	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 18:41	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 18:41	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 18:41	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Client Sample ID: TRIP BLANK

Date Collected: 03/04/16 08:00
Date Received: 03/04/16 15:40

Lab Sample ID: 160-16391-4

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 18:41	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 18:41	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 18:41	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 18:41	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 18:41	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 18:41	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 18:41	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 18:41	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 18:41	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 18:41	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 18:41	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 18:41	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 18:41	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 18:41	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 18:41	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 18:41	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 18:41	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 18:41	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 18:41	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 18:41	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 18:41	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 18:41	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 18:41	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 18:41	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 18:41	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 18:41	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 18:41	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 18:41	1
Toluene	ND		5.0	1.0	ug/L			03/10/16 18:41	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 18:41	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 18:41	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 18:41	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 18:41	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 18:41	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 18:41	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 18:41	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 18:41	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 18:41	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 18:41	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*71 - 139*		*03/10/16 18:41*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 121*		*03/10/16 18:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*76 - 121*		*03/10/16 18:41*	*1*
Toluene-d8 (Surr)	*100*		*80 - 129*		*03/10/16 18:41*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 160-239988/7
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 17:24	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 17:24	1
Acrolein	ND		50	3.1	ug/L			03/10/16 17:24	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 17:24	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 17:24	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 17:24	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 17:24	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 17:24	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 17:24	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 17:24	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 17:24	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 17:24	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 17:24	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 17:24	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 17:24	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 17:24	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 17:24	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 17:24	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 17:24	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 17:24	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 17:24	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 17:24	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 17:24	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 17:24	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 17:24	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 17:24	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 17:24	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 17:24	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 17:24	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 17:24	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 17:24	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 17:24	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 17:24	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 17:24	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 17:24	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 17:24	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 17:24	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 17:24	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 17:24	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 17:24	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 17:24	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 17:24	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 17:24	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 17:24	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 17:24	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 17:24	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 17:24	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 17:24	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 160-239988/7
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 17:24	1
Toluene	ND		5.0	1.0	ug/L			03/10/16 17:24	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 17:24	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 17:24	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 17:24	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 17:24	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 17:24	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 17:24	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 17:24	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 17:24	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 17:24	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 17:24	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 17:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*71 - 139*		*03/10/16 17:24*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 121*		*03/10/16 17:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*76 - 121*		*03/10/16 17:24*	*1*
Toluene-d8 (Surr)	*98*		*80 - 129*		*03/10/16 17:24*	*1*

Lab Sample ID: LCS 160-239988/4
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	49.5		ug/L		99	63 - 131
Acetonitrile	500	438		ug/L		88	71 - 124
Acrolein	250	264		ug/L		106	45 - 140
Acrylonitrile	500	537		ug/L		107	81 - 117
Allyl chloride	50.0	52.2		ug/L		104	74 - 126
Benzene	50.0	50.1		ug/L		100	80 - 120
Bromochloromethane	50.0	51.1		ug/L		102	80 - 120
Bromodichloromethane	50.0	51.7		ug/L		103	80 - 120
Bromoform	50.0	53.8		ug/L		108	80 - 120
Carbon disulfide	50.0	53.4		ug/L		107	79 - 126
Carbon tetrachloride	50.0	50.8		ug/L		102	73 - 123
Chlorobenzene	50.0	48.8		ug/L		98	80 - 120
Chloroethane	50.0	50.6		ug/L		101	52 - 140
Chloroform	50.0	51.0		ug/L		102	80 - 120
Chloroprene	50.0	49.4		ug/L		99	80 - 120
cis-1,2-Dichloroethene	50.0	50.5		ug/L		101	80 - 120
cis-1,3-Dichloropropene	50.0	51.0		ug/L		102	80 - 122
Dibromochloromethane	50.0	52.3		ug/L		105	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	52.2		ug/L		104	77 - 125
1,2-Dibromoethane (EDB)	50.0	49.8		ug/L		100	80 - 120
1,2-Dichlorobenzene	50.0	48.2		ug/L		96	80 - 120
1,3-Dichlorobenzene	50.0	47.0		ug/L		94	80 - 120
1,4-Dichlorobenzene	50.0	48.2		ug/L		96	80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 160-239988/4
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	50.0	54.3		ug/L		109	62 - 140
1,1-Dichloroethane	50.0	50.2		ug/L		100	80 - 120
1,2-Dichloroethane	50.0	51.0		ug/L		102	69 - 124
1,1-Dichloroethene	50.0	52.0		ug/L		104	77 - 126
1,2-Dichloropropane	50.0	49.5		ug/L		99	80 - 120
1,3-Dichloropropane	50.0	50.2		ug/L		100	80 - 120
2,2-Dichloropropane	50.0	51.9		ug/L		104	69 - 130
1,1-Dichloropropene	50.0	49.9		ug/L		100	80 - 120
Ethylbenzene	50.0	49.5		ug/L		99	80 - 120
Ethyl methacrylate	50.0	56.9		ug/L		114	80 - 124
2-Hexanone	50.0	56.1		ug/L		112	64 - 136
Isobutyl alcohol	1250	1230		ug/L		99	54 - 140
Methacrylonitrile	500	517		ug/L		103	69 - 131
Methyl bromide	50.0	57.0		ug/L		114	57 - 139
Methyl chloride	50.0	51.0		ug/L		102	70 - 127
Methylene bromide	50.0	52.7		ug/L		105	78 - 120
Methylene Chloride	50.0	51.2		ug/L		102	80 - 120
Methyl Ethyl Ketone	50.0	57.5		ug/L		115	70 - 130
Methyl iodide	50.0	50.8		ug/L		102	73 - 125
Methyl methacrylate	100	107		ug/L		107	80 - 126
4-Methyl-2-pentanone (MIBK)	50.0	54.6		ug/L		109	76 - 129
Propionitrile	500	526		ug/L		105	78 - 120
Styrene	50.0	52.2		ug/L		104	80 - 120
1,1,1,2-Tetrachloroethane	50.0	50.2		ug/L		100	80 - 120
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/L		100	80 - 120
Tetrachloroethene	50.0	48.6		ug/L		97	80 - 120
Toluene	50.0	48.9		ug/L		98	80 - 120
trans-1,4-Dichloro-2-butene	50.0	54.4		ug/L		109	75 - 127
trans-1,2-Dichloroethene	50.0	50.4		ug/L		101	80 - 120
trans-1,3-Dichloropropene	50.0	52.0		ug/L		104	80 - 130
1,1,1-Trichloroethane	50.0	51.2		ug/L		102	76 - 120
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	80 - 120
Trichloroethene	50.0	48.5		ug/L		97	73 - 120
Trichlorofluoromethane	50.0	53.2		ug/L		106	74 - 130
1,2,3-Trichloropropane	50.0	53.1		ug/L		106	80 - 120
Vinyl acetate	50.0	58.9		ug/L		118	37 - 140
Vinyl chloride	50.0	49.7		ug/L		99	51 - 140
Xylenes, Total	100	98.0		ug/L		98	80 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*71 - 139*
Dibromofluoromethane (Surr)	*101*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*99*		*76 - 121*
Toluene-d8 (Surr)	*97*		*80 - 129*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 160-239988/5
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	47.6		ug/L		95	63 - 131	4	20
Acetonitrile	500	393		ug/L		79	71 - 124	11	20
Acrolein	250	242		ug/L		97	45 - 140	9	20
Acrylonitrile	500	496		ug/L		99	81 - 117	8	20
Allyl chloride	50.0	51.2		ug/L		102	74 - 126	2	20
Benzene	50.0	50.0		ug/L		100	80 - 120	0	20
Bromochloromethane	50.0	49.2		ug/L		98	80 - 120	4	20
Bromodichloromethane	50.0	52.0		ug/L		104	80 - 120	1	20
Bromoform	50.0	52.5		ug/L		105	80 - 120	3	20
Carbon disulfide	50.0	51.6		ug/L		103	79 - 126	3	20
Carbon tetrachloride	50.0	49.5		ug/L		99	73 - 123	3	20
Chlorobenzene	50.0	48.9		ug/L		98	80 - 120	0	20
Chloroethane	50.0	48.6		ug/L		97	52 - 140	4	20
Chloroform	50.0	50.5		ug/L		101	80 - 120	1	20
Chloroprene	50.0	49.2		ug/L		98	80 - 120	0	20
cis-1,2-Dichloroethene	50.0	49.9		ug/L		100	80 - 120	1	20
cis-1,3-Dichloropropene	50.0	51.6		ug/L		103	80 - 122	1	20
Dibromochloromethane	50.0	50.8		ug/L		102	80 - 120	3	20
1,2-Dibromo-3-Chloropropane	50.0	55.2		ug/L		110	77 - 125	6	20
1,2-Dibromoethane (EDB)	50.0	49.6		ug/L		99	80 - 120	0	20
1,2-Dichlorobenzene	50.0	47.7		ug/L		95	80 - 120	1	20
1,3-Dichlorobenzene	50.0	47.0		ug/L		94	80 - 120	0	20
1,4-Dichlorobenzene	50.0	48.0		ug/L		96	80 - 120	0	20
Dichlorodifluoromethane	50.0	50.3		ug/L		101	62 - 140	8	20
1,1-Dichloroethane	50.0	49.9		ug/L		100	80 - 120	1	20
1,2-Dichloroethane	50.0	50.9		ug/L		102	69 - 124	0	20
1,1-Dichloroethene	50.0	49.7		ug/L		99	77 - 126	4	20
1,2-Dichloropropane	50.0	50.2		ug/L		100	80 - 120	1	20
1,3-Dichloropropane	50.0	49.0		ug/L		98	80 - 120	2	20
2,2-Dichloropropane	50.0	49.8		ug/L		100	69 - 130	4	20
1,1-Dichloropropene	50.0	48.7		ug/L		97	80 - 120	2	20
Ethylbenzene	50.0	49.6		ug/L		99	80 - 120	0	20
Ethyl methacrylate	50.0	54.1		ug/L		108	80 - 124	5	20
2-Hexanone	50.0	52.7		ug/L		105	64 - 136	6	20
Isobutyl alcohol	1250	1110		ug/L		89	54 - 140	11	20
Methacrylonitrile	500	499		ug/L		100	69 - 131	3	20
Methyl bromide	50.0	53.6		ug/L		107	57 - 139	6	20
Methyl chloride	50.0	48.5		ug/L		97	70 - 127	5	20
Methylene bromide	50.0	50.9		ug/L		102	78 - 120	4	20
Methylene Chloride	50.0	50.0		ug/L		100	80 - 120	3	20
Methyl Ethyl Ketone	50.0	53.9		ug/L		108	70 - 130	6	20
Methyl iodide	50.0	49.4		ug/L		99	73 - 125	3	20
Methyl methacrylate	100	105		ug/L		105	80 - 126	1	20
4-Methyl-2-pentanone (MIBK)	50.0	52.1		ug/L		104	76 - 129	5	20
Propionitrile	500	507		ug/L		101	78 - 120	4	20
Styrene	50.0	52.4		ug/L		105	80 - 120	0	20
1,1,1,2-Tetrachloroethane	50.0	50.3		ug/L		101	80 - 120	0	20
1,1,2,2-Tetrachloroethane	50.0	48.7		ug/L		97	80 - 120	2	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 160-239988/5
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene			50.0	47.2		ug/L		94	80 - 120	3	20
Toluene			50.0	48.5		ug/L		97	80 - 120	1	20
trans-1,4-Dichloro-2-butene			50.0	52.4		ug/L		105	75 - 127	4	20
trans-1,2-Dichloroethene			50.0	49.4		ug/L		99	80 - 120	2	20
trans-1,3-Dichloropropene			50.0	51.0		ug/L		102	80 - 130	2	20
1,1,1-Trichloroethane			50.0	49.9		ug/L		100	76 - 120	2	20
1,1,2-Trichloroethane			50.0	49.9		ug/L		100	80 - 120	2	20
Trichloroethene			50.0	48.4		ug/L		97	73 - 120	0	20
Trichlorofluoromethane			50.0	51.0		ug/L		102	74 - 130	4	20
1,2,3-Trichloropropane			50.0	49.7		ug/L		99	80 - 120	7	20
Vinyl acetate			50.0	50.1		ug/L		100	37 - 140	16	20
Vinyl chloride			50.0	48.3		ug/L		97	51 - 140	3	20
Xylenes, Total			100	96.9		ug/L		97	80 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*71 - 139*
Dibromofluoromethane (Surr)	*99*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*98*		*76 - 121*
Toluene-d8 (Surr)	*97*		*80 - 129*

Lab Sample ID: 160-16391-1 MS
Matrix: Water
Analysis Batch: 239988

Client Sample ID: PZ-101-SS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acetone	ND		50.0	50.7		ug/L		101	52 - 138		
Acetonitrile	ND		500	490		ug/L		98	57 - 140		
Acrolein	ND		250	257		ug/L		103	40 - 150		
Acrylonitrile	ND		500	545		ug/L		109	58 - 142		
Allyl chloride	ND		50.0	51.8		ug/L		104	74 - 124		
Benzene	ND		50.0	50.6		ug/L		101	80 - 120		
Bromochloromethane	ND		50.0	52.3		ug/L		105	72 - 125		
Bromodichloromethane	ND		50.0	53.0		ug/L		106	71 - 128		
Bromoform	ND		50.0	52.6		ug/L		105	65 - 133		
Carbon disulfide	ND		50.0	52.7		ug/L		105	69 - 139		
Carbon tetrachloride	ND		50.0	49.7		ug/L		99	70 - 126		
Chlorobenzene	5.8		50.0	54.0		ug/L		96	80 - 120		
Chloroethane	ND		50.0	53.1		ug/L		106	59 - 144		
Chloroform	ND		50.0	52.0		ug/L		104	80 - 120		
Chloroprene	ND		50.0	48.3		ug/L		97	77 - 121		
cis-1,2-Dichloroethene	ND		50.0	51.4		ug/L		103	80 - 124		
cis-1,3-Dichloropropene	ND		50.0	51.2		ug/L		102	67 - 130		
Dibromochloromethane	ND		50.0	52.6		ug/L		105	68 - 133		
1,2-Dibromo-3-Chloropropane	ND		50.0	55.1		ug/L		110	58 - 148		
1,2-Dibromoethane (EDB)	ND		50.0	50.4		ug/L		101	65 - 138		
1,2-Dichlorobenzene	ND		50.0	48.4		ug/L		97	80 - 124		
1,3-Dichlorobenzene	ND		50.0	46.9		ug/L		94	80 - 120		
1,4-Dichlorobenzene	0.70	J	50.0	48.4		ug/L		95	80 - 120		

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16391-1 MS
Matrix: Water
Analysis Batch: 239988

Client Sample ID: PZ-101-SS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	ND		50.0	51.7		ug/L		103	65 - 140
1,1-Dichloroethane	ND		50.0	51.0		ug/L		102	80 - 120
1,2-Dichloroethane	ND		50.0	52.4		ug/L		105	56 - 136
1,1-Dichloroethene	ND		50.0	49.9		ug/L		100	66 - 137
1,2-Dichloropropane	ND		50.0	50.5		ug/L		101	80 - 123
1,3-Dichloropropane	ND		50.0	50.8		ug/L		102	70 - 136
2,2-Dichloropropane	ND		50.0	50.1		ug/L		100	54 - 148
1,1-Dichloropropene	ND		50.0	50.4		ug/L		101	80 - 121
Ethylbenzene	ND		50.0	48.5		ug/L		97	80 - 121
Ethyl methacrylate	ND		50.0	55.3		ug/L		111	62 - 142
2-Hexanone	ND		50.0	51.2		ug/L		102	47 - 150
Isobutyl alcohol	ND		1250	1020		ug/L		82	48 - 150
Methacrylonitrile	ND		500	533		ug/L		107	54 - 149
Methyl bromide	ND		50.0	55.9		ug/L		112	53 - 146
Methyl chloride	ND		50.0	43.3		ug/L		87	61 - 137
Methylene bromide	ND		50.0	52.9		ug/L		106	61 - 136
Methylene Chloride	ND		50.0	51.8		ug/L		104	80 - 120
Methyl Ethyl Ketone	ND		50.0	55.4		ug/L		111	58 - 143
Methyl iodide	ND		50.0	51.8		ug/L		104	69 - 124
Methyl methacrylate	ND		100	105		ug/L		105	56 - 150
4-Methyl-2-pentanone (MIBK)	ND		50.0	54.5		ug/L		109	53 - 150
Propionitrile	ND		500	538		ug/L		108	57 - 142
Styrene	ND		50.0	52.2		ug/L		104	44 - 150
1,1,1,2-Tetrachloroethane	ND		50.0	50.2		ug/L		100	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	49.8		ug/L		100	60 - 150
Tetrachloroethene	ND		50.0	47.2		ug/L		94	66 - 132
Toluene	ND		50.0	48.1		ug/L		96	75 - 134
trans-1,4-Dichloro-2-butene	ND		50.0	50.2		ug/L		100	55 - 146
trans-1,2-Dichloroethene	ND		50.0	49.3		ug/L		99	79 - 121
trans-1,3-Dichloropropene	ND		50.0	50.8		ug/L		102	68 - 143
1,1,1-Trichloroethane	ND		50.0	50.8		ug/L		102	74 - 123
1,1,2-Trichloroethane	ND		50.0	54.6		ug/L		109	70 - 134
Trichloroethene	ND		50.0	48.0		ug/L		96	63 - 120
Trichlorofluoromethane	ND		50.0	51.2		ug/L		102	53 - 150
1,2,3-Trichloropropane	ND		50.0	49.4		ug/L		99	62 - 137
Vinyl acetate	ND		50.0	56.6		ug/L		113	63 - 150
Vinyl chloride	ND		50.0	48.0		ug/L		96	54 - 140
Xylenes, Total	ND		100	97.9		ug/L		98	80 - 124

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*71 - 139*
Dibromofluoromethane (Surr)	*103*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*105*		*76 - 121*
Toluene-d8 (Surr)	*97*		*80 - 129*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16391-1 MSD
Matrix: Water
Analysis Batch: 239988

Client Sample ID: PZ-101-SS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		50.0	52.8		ug/L		106	52 - 138	4	20
Acetonitrile	ND		500	556		ug/L		111	57 - 140	13	20
Acrolein	ND		250	264		ug/L		106	40 - 150	3	20
Acrylonitrile	ND		500	580		ug/L		116	58 - 142	6	20
Allyl chloride	ND		50.0	54.0		ug/L		108	74 - 124	4	20
Benzene	ND		50.0	51.5		ug/L		103	80 - 120	2	20
Bromochloromethane	ND		50.0	53.6		ug/L		107	72 - 125	2	20
Bromodichloromethane	ND		50.0	54.9		ug/L		110	71 - 128	3	20
Bromoform	ND		50.0	54.4		ug/L		109	65 - 133	4	20
Carbon disulfide	ND		50.0	53.4		ug/L		107	69 - 139	1	20
Carbon tetrachloride	ND		50.0	51.0		ug/L		102	70 - 126	2	20
Chlorobenzene	5.8		50.0	54.2		ug/L		97	80 - 120	0	20
Chloroethane	ND		50.0	54.1		ug/L		108	59 - 144	2	20
Chloroform	ND		50.0	52.7		ug/L		105	80 - 120	1	20
Chloroprene	ND		50.0	49.0		ug/L		98	77 - 121	2	20
cis-1,2-Dichloroethene	ND		50.0	51.0		ug/L		102	80 - 124	1	20
cis-1,3-Dichloropropene	ND		50.0	53.2		ug/L		106	67 - 130	4	20
Dibromochloromethane	ND		50.0	52.3		ug/L		105	68 - 133	1	20
1,2-Dibromo-3-Chloropropane	ND		50.0	53.0		ug/L		106	58 - 148	4	20
1,2-Dibromoethane (EDB)	ND		50.0	53.0		ug/L		106	65 - 138	5	20
1,2-Dichlorobenzene	ND		50.0	47.9		ug/L		96	80 - 124	1	20
1,3-Dichlorobenzene	ND		50.0	46.5		ug/L		93	80 - 120	1	20
1,4-Dichlorobenzene	0.70	J	50.0	48.6		ug/L		96	80 - 120	0	20
Dichlorodifluoromethane	ND		50.0	51.9		ug/L		104	65 - 140	0	20
1,1-Dichloroethane	ND		50.0	52.1		ug/L		104	80 - 120	2	20
1,2-Dichloroethane	ND		50.0	55.0		ug/L		110	56 - 136	5	20
1,1-Dichloroethene	ND		50.0	50.5		ug/L		101	66 - 137	1	20
1,2-Dichloropropane	ND		50.0	52.7		ug/L		105	80 - 123	4	20
1,3-Dichloropropane	ND		50.0	51.4		ug/L		103	70 - 136	1	20
2,2-Dichloropropane	ND		50.0	49.1		ug/L		98	54 - 148	2	20
1,1-Dichloropropene	ND		50.0	51.5		ug/L		103	80 - 121	2	20
Ethylbenzene	ND		50.0	48.4		ug/L		97	80 - 121	0	20
Ethyl methacrylate	ND		50.0	58.7		ug/L		117	62 - 142	6	20
2-Hexanone	ND		50.0	56.7		ug/L		113	47 - 150	10	20
Isobutyl alcohol	ND		1250	1140		ug/L		91	48 - 150	11	20
Methacrylonitrile	ND		500	571		ug/L		114	54 - 149	7	20
Methyl bromide	ND		50.0	54.4		ug/L		109	53 - 146	3	20
Methyl chloride	ND		50.0	44.0		ug/L		88	61 - 137	2	20
Methylene bromide	ND		50.0	55.9		ug/L		112	61 - 136	6	20
Methylene Chloride	ND		50.0	52.4		ug/L		105	80 - 120	1	20
Methyl Ethyl Ketone	ND		50.0	61.3		ug/L		123	58 - 143	10	20
Methyl iodide	ND		50.0	51.8		ug/L		104	69 - 124	0	20
Methyl methacrylate	ND		100	113		ug/L		113	56 - 150	7	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	56.5		ug/L		113	53 - 150	4	20
Propionitrile	ND		500	587		ug/L		117	57 - 142	9	20
Styrene	ND		50.0	51.4		ug/L		103	44 - 150	2	20
1,1,1,2-Tetrachloroethane	ND		50.0	50.6		ug/L		101	80 - 120	1	20
1,1,2,2-Tetrachloroethane	ND		50.0	51.5		ug/L		103	60 - 150	3	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16391-1 MSD
Matrix: Water
Analysis Batch: 239988

Client Sample ID: PZ-101-SS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	ND		50.0	46.3		ug/L		93	66 - 132	2	20
Toluene	ND		50.0	48.1		ug/L		96	75 - 134	0	20
trans-1,4-Dichloro-2-butene	ND		50.0	52.2		ug/L		104	55 - 146	4	20
trans-1,2-Dichloroethene	ND		50.0	50.5		ug/L		101	79 - 121	2	20
trans-1,3-Dichloropropene	ND		50.0	52.6		ug/L		105	68 - 143	3	20
1,1,1-Trichloroethane	ND		50.0	51.7		ug/L		103	74 - 123	2	20
1,1,2-Trichloroethane	ND		50.0	56.6		ug/L		113	70 - 134	4	20
Trichloroethene	ND		50.0	49.5		ug/L		99	63 - 120	3	20
Trichlorofluoromethane	ND		50.0	52.1		ug/L		104	53 - 150	2	20
1,2,3-Trichloropropane	ND		50.0	51.7		ug/L		103	62 - 137	5	20
Vinyl acetate	ND		50.0	59.9		ug/L		120	63 - 150	6	20
Vinyl chloride	ND		50.0	49.6		ug/L		99	54 - 140	3	20
Xylenes, Total	ND		100	95.6		ug/L		96	80 - 124	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*71 - 139*
Dibromofluoromethane (Surr)	*104*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*108*		*76 - 121*
Toluene-d8 (Surr)	*95*		*80 - 129*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 160-239422/1-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239422

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Acenaphthylene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Acetophenone	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Acetylaminofluorene	ND		100	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Aminobiphenyl	ND		50	1.1	ug/L		03/07/16 16:12	03/15/16 17:56	1
Anthracene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[a]anthracene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[a]pyrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[b]fluoranthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[g,h,i]perylene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzo[k]fluoranthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Benzyl alcohol	ND		10	3.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Bis(2-chloroethoxy)methane	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Bis(2-chloroethyl)ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
bis(2 chloro-1-methylethyl) ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Bis(2-ethylhexyl) phthalate	ND		10	1.9	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Bromophenyl phenyl ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Butyl benzyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Chloroaniline	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Chlorobenzilate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Chloro-3-methylphenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-239422/1-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239422

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Chlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Chlorophenyl phenyl ether	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Chrysene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Diallate	ND		20	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dibenz(a,h)anthracene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dibenzofuran	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
3,3'-Dichlorobenzidine	ND		50	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,6-Dichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Diethyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dimethoate	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
7,12-Dimethylbenz(a)anthracene	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
3,3'-Dimethylbenzidine	ND		50	2.6	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dimethylphenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dimethyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Di-n-butyl phthalate	1.18	J	10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,3-Dinitrobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,4-Dinitrobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4,6-Dinitro-2-methylphenol	ND		10	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dinitrophenol	ND		50	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4-Dinitrotoluene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,6-Dinitrotoluene	ND		10	2.2	ug/L		03/07/16 16:12	03/15/16 17:56	1
Di-n-octyl phthalate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Dinoseb	ND		20	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Diphenylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Disulfoton	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Ethyl methanesulfonate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Famphur	ND		100	1.7	ug/L		03/07/16 16:12	03/15/16 17:56	1
Fluoranthene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Fluorene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorobutadiene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachloroethane	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachlorophene	ND		250	10	ug/L		03/07/16 16:12	03/15/16 17:56	1
Hexachloropropene	ND		100	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Indeno[1,2,3-cd]pyrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Isodrin	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Isophorone	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Isosafrole	ND		20	5.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Kepone	ND		100	20	ug/L		03/07/16 16:12	03/15/16 17:56	1
Methapyrilene	ND		50	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1
3-Methylcholanthrene	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Methyl methanesulfonate	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Methylnaphthalene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Methyl parathion	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Methylphenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-239422/1-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239422

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	ND		20	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Naphthalene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,4-Naphthoquinone	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1-Naphthylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Naphthylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Nitroaniline	ND		10	1.1	ug/L		03/07/16 16:12	03/15/16 17:56	1
3-Nitroaniline	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Nitroaniline	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Nitrobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
5-Nitro-o-toluidine	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2-Nitrophenol	ND		10	1.5	ug/L		03/07/16 16:12	03/15/16 17:56	1
4-Nitrophenol	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodiethylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodimethylamine	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodi-n-butylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosomethylethylamine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosomorpholine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosopiperidine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
N-Nitrosopyrrolidine	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
o,o',o''-Triethylphosphorothioate	ND		50	1.1	ug/L		03/07/16 16:12	03/15/16 17:56	1
o-Toluidine	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Parathion	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
p-Dimethylamino azobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pentachlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pentachloronitrobenzene	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pentachlorophenol	ND		50	1.3	ug/L		03/07/16 16:12	03/15/16 17:56	1
Phenacetin	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Phenanthrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Phenol	ND		10	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Phorate	ND		50	2.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
p-Phenylene diamine	ND		100	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pronamide	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Pyrene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Safrole	ND		20	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,3,4,6-Tetrachlorophenol	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
Thionazin	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,2,4-Trichlorobenzene	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4,5-Trichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
2,4,6-Trichlorophenol	ND		10	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1
1,3,5-Trinitrobenzene	ND		50	1.0	ug/L		03/07/16 16:12	03/15/16 17:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*121*	*X*	*43 - 108*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
2-Fluorophenol (Surr)	*60*	*X*	*15 - 59*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
Nitrobenzene-d5 (Surr)	*114*	*X*	*50 - 101*	*03/07/16 16:12*	*03/15/16 17:56*	*1*
Phenol-d5 (Surr)	*39*		*10 - 50*	*03/07/16 16:12*	*03/15/16 17:56*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-239422/1-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239422

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	125	X	21 - 97	03/07/16 16:12	03/15/16 17:56	1
2,4,6-Tribromophenol (Surr)	128	X	37 - 120	03/07/16 16:12	03/15/16 17:56	1

Lab Sample ID: LCS 160-239422/2-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239422

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	200	258	*	ug/L		129	58 - 108
Acenaphthylene	200	251	*	ug/L		126	59 - 110
Anthracene	200	265	*	ug/L		132	59 - 106
Benzo[a]anthracene	200	269	*	ug/L		135	56 - 105
Benzo[a]pyrene	200	374	E *	ug/L		187	54 - 109
Benzo[b]fluoranthene	200	397	E *	ug/L		198	58 - 109
Benzo[g,h,i]perylene	200	338	E *	ug/L		169	50 - 119
Benzo[k]fluoranthene	200	382	E *	ug/L		191	54 - 109
Bis(2-chloroethoxy)methane	200	258	*	ug/L		129	59 - 110
Bis(2-chloroethyl)ether	200	254	*	ug/L		127	58 - 109
bis(2 chloro-1-methylethyl) ether	200	216	*	ug/L		108	49 - 97
Bis(2-ethylhexyl) phthalate	200	285	*	ug/L		142	58 - 111
4-Bromophenyl phenyl ether	200	275	*	ug/L		137	62 - 98
Butyl benzyl phthalate	200	274	*	ug/L		137	56 - 111
4-Chloroaniline	200	203	*	ug/L		102	43 - 97
4-Chloro-3-methylphenol	200	230	*	ug/L		115	51 - 102
2-Chloronaphthalene	200	258	*	ug/L		129	58 - 109
2-Chlorophenol	200	224	*	ug/L		112	47 - 97
4-Chlorophenyl phenyl ether	200	270	*	ug/L		135	59 - 110
Chrysene	200	277	*	ug/L		139	55 - 107
Dibenz(a,h)anthracene	200	360	E *	ug/L		180	52 - 118
Dibenzofuran	200	254	*	ug/L		127	57 - 106
3,3'-Dichlorobenzidine	200	240	*	ug/L		120	50 - 105
2,4-Dichlorophenol	200	248	*	ug/L		124	55 - 104
Diethyl phthalate	200	258	*	ug/L		129	58 - 113
2,4-Dimethylphenol	200	216	*	ug/L		108	53 - 99
Dimethyl phthalate	200	261	*	ug/L		131	60 - 114
Di-n-butyl phthalate	200	258	*	ug/L		129	60 - 105
4,6-Dinitro-2-methylphenol	200	271	*	ug/L		135	56 - 118
2,4-Dinitrophenol	200	199		ug/L		100	53 - 119
2,4-Dinitrotoluene	200	268	*	ug/L		134	57 - 117
2,6-Dinitrotoluene	200	265	*	ug/L		132	59 - 117
Di-n-octyl phthalate	200	285	*	ug/L		143	59 - 113
Diphenylamine	200	254	*	ug/L		127	58 - 102
Fluoranthene	200	264	*	ug/L		132	56 - 113
Fluorene	200	269	*	ug/L		135	61 - 113
Hexachlorobenzene	200	266	*	ug/L		133	57 - 113
Hexachlorobutadiene	200	236	*	ug/L		118	52 - 102
Hexachlorocyclopentadiene	200	234		ug/L		117	40 - 120
Hexachloroethane	200	226	*	ug/L		113	52 - 102

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 160-239422/2-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239422

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Indeno[1,2,3-cd]pyrene	200	358	E *	ug/L		179	49 - 120
Isophorone	200	212	*	ug/L		106	56 - 101
2-Methylnaphthalene	200	250	*	ug/L		125	54 - 101
2-Methylphenol	200	192		ug/L		96	40 - 96
3 & 4 Methylphenol	200	191	*	ug/L		96	40 - 87
Naphthalene	200	251	*	ug/L		126	54 - 98
2-Nitroaniline	200	233		ug/L		116	57 - 120
3-Nitroaniline	200	244	*	ug/L		122	47 - 113
4-Nitroaniline	200	260	*	ug/L		130	51 - 119
Nitrobenzene	200	240	*	ug/L		120	59 - 110
2-Nitrophenol	200	266	*	ug/L		133	58 - 111
4-Nitrophenol	200	80.0		ug/L		40	20 - 47
N-Nitrosodi-n-propylamine	200	237	*	ug/L		119	59 - 115
Pentachlorophenol	200	264	*	ug/L		132	49 - 115
Phenanthrene	200	263	*	ug/L		132	59 - 110
Phenol	200	81.2		ug/L		41	20 - 69
Pyrene	200	271	*	ug/L		136	55 - 105
1,2,4-Trichlorobenzene	200	242	*	ug/L		121	56 - 100
2,4,5-Trichlorophenol	200	252	*	ug/L		126	56 - 113
2,4,6-Trichlorophenol	200	265	*	ug/L		133	47 - 116

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*129*	*X*	*43 - 108*
2-Fluorophenol (Surr)	*65*	*X*	*15 - 59*
Nitrobenzene-d5 (Surr)	*120*	*X*	*50 - 101*
Phenol-d5 (Surr)	*43*		*10 - 50*
Terphenyl-d14 (Surr)	*132*	*X*	*21 - 97*
2,4,6-Tribromophenol (Surr)	*145*	*X*	*37 - 120*

Lab Sample ID: LCSD 160-239422/3-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239422

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	200	212		ug/L		106	58 - 108	20	20
Acenaphthylene	200	212		ug/L		106	59 - 110	17	20
Anthracene	200	218	*	ug/L		109	59 - 106	19	20
Benzo[a]anthracene	200	224	*	ug/L		112	56 - 105	18	20
Benzo[a]pyrene	200	309	E *	ug/L		155	54 - 109	19	20
Benzo[b]fluoranthene	200	326	E *	ug/L		163	58 - 109	20	20
Benzo[g,h,i]perylene	200	286	*	ug/L		143	50 - 119	17	20
Benzo[k]fluoranthene	200	309	E *	ug/L		154	54 - 109	21	20
Bis(2-chloroethoxy)methane	200	213		ug/L		107	59 - 110	19	20
Bis(2-chloroethyl)ether	200	205	*	ug/L		103	58 - 109	21	20
bis(2 chloro-1-methylethyl) ether	200	178		ug/L		89	49 - 97	19	20
Bis(2-ethylhexyl) phthalate	200	232	*	ug/L		116	58 - 111	21	20
4-Bromophenyl phenyl ether	200	224	*	ug/L		112	62 - 98	20	20
Butyl benzyl phthalate	200	227	*	ug/L		114	56 - 111	18	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 160-239422/3-A
Matrix: Water
Analysis Batch: 240637

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239422

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloroaniline	200	162	*	ug/L		81	43 - 97	23	20
4-Chloro-3-methylphenol	200	192		ug/L		96	51 - 102	18	20
2-Chloronaphthalene	200	212		ug/L		106	58 - 109	20	20
2-Chlorophenol	200	185		ug/L		93	47 - 97	19	20
4-Chlorophenyl phenyl ether	200	225	*	ug/L		112	59 - 110	19	20
Chrysene	200	230	*	ug/L		115	55 - 107	18	20
Dibenz(a,h)anthracene	200	305	E *	ug/L		152	52 - 118	17	20
Dibenzofuran	200	212		ug/L		106	57 - 106	18	20
3,3'-Dichlorobenzidine	200	199		ug/L		100	50 - 105	19	20
2,4-Dichlorophenol	200	203		ug/L		102	55 - 104	20	20
Diethyl phthalate	200	215		ug/L		108	58 - 113	18	20
2,4-Dimethylphenol	200	175	*	ug/L		87	53 - 99	21	20
Dimethyl phthalate	200	215		ug/L		108	60 - 114	19	20
Di-n-butyl phthalate	200	215	*	ug/L		108	60 - 105	18	20
4,6-Dinitro-2-methylphenol	200	223		ug/L		112	56 - 118	19	20
2,4-Dinitrophenol	200	178		ug/L		89	53 - 119	11	20
2,4-Dinitrotoluene	200	220		ug/L		110	57 - 117	20	20
2,6-Dinitrotoluene	200	222		ug/L		111	59 - 117	18	20
Di-n-octyl phthalate	200	239	*	ug/L		120	59 - 113	18	20
Diphenylamine	200	209	*	ug/L		104	58 - 102	20	20
Fluoranthene	200	218		ug/L		109	56 - 113	19	20
Fluorene	200	223		ug/L		112	61 - 113	19	20
Hexachlorobenzene	200	218		ug/L		109	57 - 113	20	20
Hexachlorobutadiene	200	185	*	ug/L		92	52 - 102	24	20
Hexachlorocyclopentadiene	200	186	*	ug/L		93	40 - 120	23	20
Hexachloroethane	200	174	*	ug/L		87	52 - 102	26	20
Indeno[1,2,3-cd]pyrene	200	301	E *	ug/L		150	49 - 120	17	20
Isophorone	200	175		ug/L		88	56 - 101	19	20
2-Methylnaphthalene	200	202	*	ug/L		101	54 - 101	21	20
2-Methylphenol	200	157		ug/L		79	40 - 96	20	20
3 & 4 Methylphenol	200	161		ug/L		80	40 - 87	18	20
Naphthalene	200	202	*	ug/L		101	54 - 98	22	20
2-Nitroaniline	200	191		ug/L		96	57 - 120	20	20
3-Nitroaniline	200	201		ug/L		100	47 - 113	19	20
4-Nitroaniline	200	215		ug/L		107	51 - 119	19	20
Nitrobenzene	200	198		ug/L		99	59 - 110	19	20
2-Nitrophenol	200	219		ug/L		110	58 - 111	19	20
4-Nitrophenol	200	72.0		ug/L		36	20 - 47	11	20
N-Nitrosodi-n-propylamine	200	196		ug/L		98	59 - 115	19	20
Pentachlorophenol	200	218		ug/L		109	49 - 115	19	20
Phenanthrene	200	218		ug/L		109	59 - 110	19	20
Phenol	200	72.1		ug/L		36	20 - 69	12	20
Pyrene	200	227	*	ug/L		113	55 - 105	18	20
1,2,4-Trichlorobenzene	200	192	*	ug/L		96	56 - 100	23	20
2,4,5-Trichlorophenol	200	211		ug/L		105	56 - 113	18	20
2,4,6-Trichlorophenol	200	222		ug/L		111	47 - 116	18	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 160-239422/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240637 — **Prep Batch: 239422**

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*106*		*43 - 108*
2-Fluorophenol (Surr)	*56*		*15 - 59*
Nitrobenzene-d5 (Surr)	*99*		*50 - 101*
Phenol-d5 (Surr)	*38*		*10 - 50*
Terphenyl-d14 (Surr)	*109*	*X*	*21 - 97*
2,4,6-Tribromophenol (Surr)	*123*	*X*	*37 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-242201/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.010	mg/L			03/25/16 12:49	1
Sulfate	ND		0.50	0.050	mg/L			03/25/16 12:49	1
Chloride	ND		0.20	0.020	mg/L			03/25/16 12:49	1

Lab Sample ID: LCS 160-242201/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.00	0.963		mg/L		96	90 - 110
Sulfate	8.00	7.58		mg/L		95	90 - 110
Chloride	2.00	1.87		mg/L		93	90 - 110

Lab Sample ID: 160-16391-1 MS — **Client Sample ID: PZ-101-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	0.66		4.00	4.55		mg/L		97	90 - 110

Lab Sample ID: 160-16391-1 DU — **Client Sample ID: PZ-101-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfate	0.66			0.491	J F5	mg/L				30	20

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 160-16391-1 MS — **Client Sample ID: PZ-101-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride - DL	2.2		40.0	44.4		mg/L		105	90 - 110

Lab Sample ID: 160-16391-1 DU — **Client Sample ID: PZ-101-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride - DL	2.2		2.23		mg/L		3	20

Method: 300.0 - Anions, Ion Chromatography - DL2

Lab Sample ID: 160-16391-1 MS — **Client Sample ID: PZ-101-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride - DL2	210		400	587		mg/L		94	90 - 110

Lab Sample ID: 160-16391-1 DU — **Client Sample ID: PZ-101-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride - DL2	210		219		mg/L		3	20

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-239971/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243457 — **Prep Batch: 239971**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	3.7	ug/L		03/10/16 12:24	04/02/16 04:00	1
Barium	ND		50	2.1	ug/L		03/10/16 12:24	04/02/16 04:00	1
Beryllium	ND		5.0	0.28	ug/L		03/10/16 12:24	04/02/16 04:00	1
Boron	ND	^	50	7.2	ug/L		03/10/16 12:24	04/02/16 04:00	1
Cadmium	ND		5.0	0.34	ug/L		03/10/16 12:24	04/02/16 04:00	1
CaHard	59.4	J	1000	54	ug/L		03/10/16 12:24	04/02/16 04:00	1
Calcium	ND		1000	54	ug/L		03/10/16 12:24	04/02/16 04:00	1
Cobalt	ND		50	2.7	ug/L		03/10/16 12:24	04/02/16 04:00	1
Copper	ND		25	2.1	ug/L		03/10/16 12:24	04/02/16 04:00	1
Iron	ND		100	13	ug/L		03/10/16 12:24	04/02/16 04:00	1
Lead	ND		10	0.60	ug/L		03/10/16 12:24	04/02/16 04:00	1
Magnesium	ND		1.0	0.051	mg/L		03/10/16 12:24	04/02/16 04:00	1
Manganese	ND		15	1.0	ug/L		03/10/16 12:24	04/02/16 04:00	1
MgHard	ND		1000	51	ug/L		03/10/16 12:24	04/02/16 04:00	1
Nickel	ND		0.040	0.0026	mg/L		03/10/16 12:24	04/02/16 04:00	1
Phosphorus	23.6	J ^	250	14	ug/L		03/10/16 12:24	04/02/16 04:00	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 160-239971/1-A
Matrix: Water
Analysis Batch: 243457

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		15	2.1	ug/L		03/10/16 12:24	04/02/16 04:00	1
Silver	ND		20	0.99	ug/L		03/10/16 12:24	04/02/16 04:00	1
Sodium	ND		1000	110	ug/L		03/10/16 12:24	04/02/16 04:00	1
Thallium	ND		20	2.4	ug/L		03/10/16 12:24	04/02/16 04:00	1
Total Hardness	ND		5000	1700	ug/L		03/10/16 12:24	04/02/16 04:00	1
Vanadium	ND		50	4.4	ug/L		03/10/16 12:24	04/02/16 04:00	1
Zinc	ND		20	8.3	ug/L		03/10/16 12:24	04/02/16 04:00	1

Lab Sample ID: MB 160-239971/1-A
Matrix: Water
Analysis Batch: 244889

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10	1.8	ug/L		03/10/16 12:24	04/06/16 19:42	1
Chromium	ND		10	3.4	ug/L		03/10/16 12:24	04/06/16 19:42	1

Lab Sample ID: LCS 160-239971/2-A
Matrix: Water
Analysis Batch: 243457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239971

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	484		ug/L		97	80 - 120
Barium	1000	1010		ug/L		101	80 - 120
Beryllium	1000	995		ug/L		100	80 - 120
Boron	2000	2000	^	ug/L		100	80 - 120
Cadmium	1000	975		ug/L		98	80 - 120
Calcium	10000	10800		ug/L		108	80 - 120
Cobalt	1000	1050		ug/L		105	80 - 120
Copper	1000	993		ug/L		99	80 - 120
Iron	10000	9850		ug/L		98	80 - 120
Lead	1000	1010		ug/L		101	80 - 120
Magnesium	10.0	10.0		mg/L		100	80 - 120
Manganese	1000	989		ug/L		99	80 - 120
Nickel	1.00	1.03		mg/L		103	80 - 120
Phosphorus	1000	1070	^	ug/L		107	80 - 120
Selenium	500	486		ug/L		97	80 - 120
Silver	200	195		ug/L		98	80 - 120
Sodium	10000	9890		ug/L		99	80 - 120
Thallium	200	212		ug/L		106	80 - 120
Vanadium	1000	987		ug/L		99	80 - 120
Zinc	1000	986		ug/L		99	80 - 120

Lab Sample ID: LCS 160-239971/2-A
Matrix: Water
Analysis Batch: 244889

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239971

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	932		ug/L		93	80 - 120
Chromium	1000	987		ug/L		99	80 - 120

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Lab Sample ID: 160-16391-1 MS
Matrix: Water
Analysis Batch: 243457

Client Sample ID: PZ-101-SS
Prep Type: Total/NA
Prep Batch: 239971

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		500	520		ug/L		104	75 - 125
Barium	500		1000	1510		ug/L		101	75 - 125
Beryllium	ND		1000	1020		ug/L		102	75 - 125
Boron	760	^	2000	2720	^	ug/L		98	75 - 125
Cadmium	ND		1000	1040		ug/L		104	75 - 125
Calcium	180000		10000	183000	4	ug/L		47	75 - 125
Cobalt	ND		1000	1090		ug/L		109	75 - 125
Copper	ND		1000	1050		ug/L		105	75 - 125
Iron	2100		10000	12000		ug/L		100	75 - 125
Lead	ND		1000	1040		ug/L		104	75 - 125
Magnesium	95		10.0	105	4	mg/L		103	75 - 125
Manganese	43	J	1000	1040		ug/L		100	75 - 125
Nickel	0.015	J	1.00	1.09		mg/L		107	75 - 125
Phosphorus	ND	^	1000	1200	J ^	ug/L		120	75 - 125
Selenium	ND		500	529		ug/L		106	75 - 125
Silver	ND		200	203		ug/L		101	75 - 125
Sodium	100000		10000	110000	4	ug/L		98	75 - 125
Thallium	ND		200	229		ug/L		114	75 - 125
Vanadium	27	J	1000	980		ug/L		95	75 - 125
Zinc	ND		1000	1070		ug/L		107	75 - 125

Lab Sample ID: 160-16391-1 MS
Matrix: Water
Analysis Batch: 244889

Client Sample ID: PZ-101-SS
Prep Type: Total/NA
Prep Batch: 239971

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	31	J	1000	983		ug/L		95	75 - 125
Chromium	ND		1000	1010		ug/L		101	75 - 125

Lab Sample ID: 160-16391-1 MSD
Matrix: Water
Analysis Batch: 243457

Client Sample ID: PZ-101-SS
Prep Type: Total/NA
Prep Batch: 239971

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		500	535		ug/L		107	75 - 125	3	20
Barium	500		1000	1550		ug/L		105	75 - 125	3	20
Beryllium	ND		1000	1040		ug/L		104	75 - 125	3	20
Boron	760	^	2000	2830	^	ug/L		104	75 - 125	4	20
Cadmium	ND		1000	1090		ug/L		109	75 - 125	5	20
Calcium	180000		10000	192000	4	ug/L		138	75 - 125	5	20
Cobalt	ND		1000	1140		ug/L		114	75 - 125	4	20
Copper	ND		1000	1090		ug/L		109	75 - 125	4	20
Iron	2100		10000	12500		ug/L		104	75 - 125	4	20
Lead	ND		1000	1100		ug/L		110	75 - 125	5	20
Magnesium	95		10.0	109	4	mg/L		143	75 - 125	4	20
Manganese	43	J	1000	1060		ug/L		102	75 - 125	2	20
Nickel	0.015	J	1.00	1.14		mg/L		112	75 - 125	5	20
Phosphorus	ND	^	1000	1250	J ^	ug/L		125	75 - 125	4	20
Selenium	ND		500	534		ug/L		107	75 - 125	1	20
Silver	ND		200	218		ug/L		109	75 - 125	7	20
Sodium	100000		10000	114000	4	ug/L		133	75 - 125	3	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 160-16391-1 MSD — **Client Sample ID: PZ-101-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243457 — **Prep Batch: 239971**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Thallium	ND		200	238		ug/L		119	75 - 125	4	20
Vanadium	27	J	1000	1010		ug/L		99	75 - 125	3	20
Zinc	ND		1000	1120		ug/L		112	75 - 125	5	20

Lab Sample ID: 160-16391-1 MSD — **Client Sample ID: PZ-101-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244889 — **Prep Batch: 239971**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	31	J	1000	954		ug/L		92	75 - 125	3	20
Chromium	ND		1000	1000		ug/L		100	75 - 125	0	20

Lab Sample ID: MB 160-240394/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243457 — **Prep Batch: 240394**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	3.7	ug/L		03/14/16 13:50	04/02/16 01:25	1
Barium	ND		50	2.1	ug/L		03/14/16 13:50	04/02/16 01:25	1
Beryllium	ND		5.0	0.28	ug/L		03/14/16 13:50	04/02/16 01:25	1
Boron	ND	^	50	7.2	ug/L		03/14/16 13:50	04/02/16 01:25	1
Cadmium	ND		5.0	0.34	ug/L		03/14/16 13:50	04/02/16 01:25	1
CaHard	61.9	J	1000	54	ug/L		03/14/16 13:50	04/02/16 01:25	1
Calcium	ND		1000	54	ug/L		03/14/16 13:50	04/02/16 01:25	1
Cobalt	ND		50	2.7	ug/L		03/14/16 13:50	04/02/16 01:25	1
Copper	ND		25	2.1	ug/L		03/14/16 13:50	04/02/16 01:25	1
Iron	187		100	13	ug/L		03/14/16 13:50	04/02/16 01:25	1
Lead	ND		10	0.60	ug/L		03/14/16 13:50	04/02/16 01:25	1
Magnesium	ND		1.0	0.051	mg/L		03/14/16 13:50	04/02/16 01:25	1
Manganese	ND		15	1.0	ug/L		03/14/16 13:50	04/02/16 01:25	1
MgHard	65.1	J	1000	51	ug/L		03/14/16 13:50	04/02/16 01:25	1
Nickel	ND		0.040	0.0026	mg/L		03/14/16 13:50	04/02/16 01:25	1
Phosphorus	19.1	J ^	250	14	ug/L		03/14/16 13:50	04/02/16 01:25	1
Selenium	ND		15	2.1	ug/L		03/14/16 13:50	04/02/16 01:25	1
Silver	ND		20	0.99	ug/L		03/14/16 13:50	04/02/16 01:25	1
Sodium	ND		1000	110	ug/L		03/14/16 13:50	04/02/16 01:25	1
Thallium	ND		20	2.4	ug/L		03/14/16 13:50	04/02/16 01:25	1
Total Hardness	ND		5000	1700	ug/L		03/14/16 13:50	04/02/16 01:25	1
Vanadium	ND		50	4.4	ug/L		03/14/16 13:50	04/02/16 01:25	1
Zinc	ND		20	8.3	ug/L		03/14/16 13:50	04/02/16 01:25	1

Lab Sample ID: MB 160-240394/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244889 — **Prep Batch: 240394**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10	1.8	ug/L		03/14/16 13:50	04/06/16 18:12	1
Chromium	ND		10	3.4	ug/L		03/14/16 13:50	04/06/16 18:12	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 160-240394/2-A
Matrix: Water
Analysis Batch: 243457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	521		ug/L		104	80 - 120
Barium	1000	1020		ug/L		102	80 - 120
Beryllium	1000	1010		ug/L		101	80 - 120
Boron	2000	2030	^	ug/L		101	80 - 120
Cadmium	1000	1040		ug/L		104	80 - 120
Calcium	10000	11500		ug/L		115	80 - 120
Cobalt	1000	1110		ug/L		111	80 - 120
Copper	1000	1060		ug/L		106	80 - 120
Iron	10000	10000		ug/L		100	80 - 120
Lead	1000	1070		ug/L		107	80 - 120
Magnesium	10.0	10.1		mg/L		101	80 - 120
Manganese	1000	1010		ug/L		101	80 - 120
Nickel	1.00	1.09		mg/L		109	80 - 120
Phosphorus	1000	1130	^	ug/L		113	80 - 120
Selenium	500	517		ug/L		103	80 - 120
Silver	200	207		ug/L		103	80 - 120
Sodium	10000	10100		ug/L		101	80 - 120
Thallium	200	222		ug/L		111	80 - 120
Vanadium	1000	1000		ug/L		100	80 - 120
Zinc	1000	1050		ug/L		105	80 - 120

Lab Sample ID: LCS 160-240394/2-A
Matrix: Water
Analysis Batch: 244889

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	928		ug/L		93	80 - 120
Chromium	1000	982		ug/L		98	80 - 120

Lab Sample ID: 160-16391-2 MS
Matrix: Water
Analysis Batch: 243457

Client Sample ID: PZ-102R-SS
Prep Type: Total/NA
Prep Batch: 240394

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		500	526		ug/L		105	75 - 125
Barium	76	J	1000	1100		ug/L		102	75 - 125
Beryllium	ND		1000	1020		ug/L		102	75 - 125
Boron	150	J ^	2000	2190	^	ug/L		102	75 - 125
Cadmium	ND		1000	1060		ug/L		106	75 - 125
Calcium	130000		10000	143000	4	ug/L		120	75 - 125
Cobalt	ND		1000	1100		ug/L		110	75 - 125
Copper	ND		1000	1080		ug/L		108	75 - 125
Iron	2000	B	10000	13300		ug/L		112	75 - 125
Lead	ND		1000	1080		ug/L		108	75 - 125
Magnesium	45		10.0	55.3	4	mg/L		108	75 - 125
Manganese	47	J	1000	1060		ug/L		101	75 - 125
Nickel	ND		1.00	1.10		mg/L		110	75 - 125
Phosphorus	ND	^	1000	1180	J ^	ug/L		118	75 - 125

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 160-16391-2 MS — **Client Sample ID: PZ-102R-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243457 — **Prep Batch: 240394**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	ND		500	529		ug/L		106	75 - 125
Silver	ND		200	205		ug/L		102	75 - 125
Sodium	21000		10000	31500		ug/L		106	75 - 125
Thallium	16	J	200	237		ug/L		110	75 - 125
Vanadium	ND		1000	1010		ug/L		101	75 - 125
Zinc	44	J	1000	1110		ug/L		107	75 - 125

Lab Sample ID: 160-16391-2 MS — **Client Sample ID: PZ-102R-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244889 — **Prep Batch: 240394**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1000	966		ug/L		97	75 - 125
Chromium	ND		1000	1010		ug/L		101	75 - 125

Lab Sample ID: 160-16391-2 MSD — **Client Sample ID: PZ-102R-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243457 — **Prep Batch: 240394**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		500	526		ug/L		105	75 - 125	0	20
Barium	76	J	1000	1090		ug/L		101	75 - 125	1	20
Beryllium	ND		1000	1010		ug/L		101	75 - 125	1	20
Boron	150	J ^	2000	2190	^	ug/L		102	75 - 125	0	20
Cadmium	ND		1000	1040		ug/L		104	75 - 125	2	20
Calcium	130000		10000	139000	4	ug/L		80	75 - 125	3	20
Cobalt	ND		1000	1090		ug/L		109	75 - 125	2	20
Copper	ND		1000	1050		ug/L		105	75 - 125	2	20
Iron	2000	B	10000	12800		ug/L		108	75 - 125	3	20
Lead	ND		1000	1060		ug/L		106	75 - 125	2	20
Magnesium	45		10.0	55.1	4	mg/L		105	75 - 125	0	20
Manganese	47	J	1000	1050		ug/L		100	75 - 125	0	20
Nickel	ND		1.00	1.08		mg/L		108	75 - 125	2	20
Phosphorus	ND	^	1000	1150	J ^	ug/L		115	75 - 125	2	20
Selenium	ND		500	520		ug/L		104	75 - 125	2	20
Silver	ND		200	212		ug/L		106	75 - 125	3	20
Sodium	21000		10000	30900		ug/L		99	75 - 125	2	20
Thallium	16	J	200	241		ug/L		112	75 - 125	2	20
Vanadium	ND		1000	1010		ug/L		101	75 - 125	0	20
Zinc	44	J	1000	1090		ug/L		105	75 - 125	2	20

Lab Sample ID: 160-16391-2 MSD — **Client Sample ID: PZ-102R-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244889 — **Prep Batch: 240394**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1000	1010		ug/L		101	75 - 125	4	20
Chromium	ND		1000	1060		ug/L		106	75 - 125	5	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-241336/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 19:26	1

Lab Sample ID: LCS 160-241336/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.84		ug/L		97	80 - 120

Lab Sample ID: 160-16343-A-2-D MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		5.00	4.82		ug/L		96	80 - 120

Lab Sample ID: 160-16343-A-2-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		5.00	4.66		ug/L		93	80 - 120	3	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 160-239473/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239473

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		5.0	3.5	mg/L			03/08/16 10:41	1

Lab Sample ID: LCS 160-239473/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239473

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	500	487		mg/L		97	90 - 110

Lab Sample ID: 160-16336-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239473

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	1100		1060		mg/L		0.9	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 160-242771/12 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.050	0.0083	mg/L			03/29/16 14:44	1

Lab Sample ID: LCS 160-242771/13 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.500	0.518		mg/L		104	90 - 110

Lab Sample ID: 160-16344-D-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	ND	F1	0.500	0.570	F1	mg/L		114	90 - 110

Lab Sample ID: 160-16344-D-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia	ND	F1	ND		mg/L		NC	20

Method: 350.1 - Nitrogen, Ammonia - DL

Lab Sample ID: 160-16391-1 MS — **Client Sample ID: PZ-101-SS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242771

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia - DL	11	F1	0.500	11.8	4	mg/L		124	90 - 110

Method: 353.1 Preserved - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 160-240661/15 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite	ND		0.050	0.0047	mg/L			03/15/16 17:20	1

Lab Sample ID: LCS 160-240661/16 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate/Nitrite	0.500	0.484		mg/L		97	90 - 110

Method: 353.1 Preserved - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 160-16308-H-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate/Nitrite	ND	F1	0.500	0.446	F1	mg/L		89	90 - 110		

Lab Sample ID: 160-16308-H-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240661

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrate/Nitrite	ND	F1		ND		mg/L				NC	20

Method: 410.4 - COD

Lab Sample ID: MB 160-239667/3-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	6.5	mg/L		03/09/16 09:08	03/09/16 13:45	1

Lab Sample ID: LCS 160-239667/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand			50.0	49.0		mg/L		98	90 - 110		

Lab Sample ID: 160-16333-L-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chemical Oxygen Demand	ND		50.0	53.0		mg/L		106	90 - 110		

Lab Sample ID: 160-16308-H-1-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239798 — **Prep Batch: 239667**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chemical Oxygen Demand	ND			ND		mg/L				NC	20

Method: 415.1 - TOC

Lab Sample ID: MB 160-242129/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.72	mg/L			03/23/16 18:30	1

Method: 415.1 - TOC (Continued)

Lab Sample ID: LCS 160-242129/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			10.0	9.74		mg/L		97	90 - 110		

Lab Sample ID: 160-16308-J-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon	1.3		5.00	6.34		mg/L		100	76 - 120		

Lab Sample ID: 160-16308-J-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon	1.3			1.24		mg/L				7	20

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-239412/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242721 — **Prep Batch: 239412**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.009150	U	0.0336	0.0337	1.00	0.0640	pCi/L	03/07/16 15:25	03/29/16 06:33	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*03/07/16 15:25*	*03/29/16 06:33*	*1*

Lab Sample ID: LCS 160-239412/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242721 — **Prep Batch: 239412**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	12.99		1.26	1.00	0.0713	pCi/L	116	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.6*		*40 - 110*

Lab Sample ID: 500-108286-C-3-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242768 — **Prep Batch: 239412**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.0562	U		0.08813	U	0.0767	1.00	0.120	pCi/L			0.25	1

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 500-108286-C-3-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242768 — **Prep Batch: 239412**

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	94.3		40 - 110

Lab Sample ID: MB 160-239583/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242941 — **Prep Batch: 239583**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.001703	U	0.0324	0.0324	1.00	0.0668	pCi/L	03/08/16 12:46	03/30/16 07:50	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110	03/08/16 12:46	03/30/16 07:50	1

Lab Sample ID: LCS 160-239583/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242941 — **Prep Batch: 239583**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	13.35		1.29	1.00	0.0968	pCi/L	120	68 - 137		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	107		40 - 110

Lab Sample ID: LCSD 160-239583/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242941 — **Prep Batch: 239583**

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.2	13.29		1.29	1.00	0.0906	pCi/L	119	68 - 137	0.02	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110

Lab Sample ID: MB 160-239587/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242937 — **Prep Batch: 239587**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.009179	U	0.0428	0.0428	1.00	0.0821	pCi/L	03/08/16 13:37	03/30/16 07:31	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	98.0		40 - 110	03/08/16 13:37	03/30/16 07:31	1

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-239587/2-A
Matrix: Water
Analysis Batch: 242937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239587

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	11.76		1.16	1.00	0.0685	pCi/L	105	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*104*		*40 - 110*

Lab Sample ID: 500-108286-C-9-B DU
Matrix: Water
Analysis Batch: 242941

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 239587

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.0918			0.1645		0.0689	1.00	0.0719	pCi/L			0.55	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*97.7*		*40 - 110*

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-239469/1-A
Matrix: Water
Analysis Batch: 241442

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239469

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1793	U	0.192	0.193	1.00	0.314	pCi/L	03/08/16 10:30	03/22/16 17:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*03/08/16 10:30*	*03/22/16 17:30*	*1*
Y Carrier	*81.5*		*40 - 110*	*03/08/16 10:30*	*03/22/16 17:30*	*1*

Lab Sample ID: LCS 160-239469/2-A
Matrix: Water
Analysis Batch: 241442

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239469

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			9.26	8.404		0.979	1.00	0.345	pCi/L	91	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.6*		*40 - 110*
Y Carrier	*83.7*		*40 - 110*

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 500-108286-C-3-D DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241439 — **Prep Batch: 239469**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.261	U		0.2753	U	0.280	1.00	0.454	pCi/L			0.03	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*94.3*		*40 - 110*
Y Carrier	*84.1*		*40 - 110*

Lab Sample ID: MB 160-239659/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242196 — **Prep Batch: 239659**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.9459		0.318	0.329	1.00	0.441	pCi/L	03/09/16 08:29	03/25/16 12:31	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.0*		*40 - 110*	*03/09/16 08:29*	*03/25/16 12:31*	*1*
Y Carrier	*86.0*		*40 - 110*	*03/09/16 08:29*	*03/25/16 12:31*	*1*

Lab Sample ID: LCS 160-239659/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242196 — **Prep Batch: 239659**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			15.4	9.402		1.07	1.00	0.364	pCi/L	61	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*104*		*40 - 110*
Y Carrier	*87.9*		*40 - 110*

Lab Sample ID: 500-108286-C-9-D DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242284 — **Prep Batch: 239659**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.318	U		0.2473	U	0.275	1.00	0.450	pCi/L			0.14	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*97.7*		*40 - 110*
Y Carrier	*82.6*		*40 - 110*

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-239662/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241797 — **Prep Batch: 239662**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.07816	U	0.218	0.218	1.00	0.376	pCi/L	03/09/16 08:31	03/23/16 12:08	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*03/09/16 08:31*	*03/23/16 12:08*	*1*
Y Carrier	*80.4*		*40 - 110*	*03/09/16 08:31*	*03/23/16 12:08*	*1*

Lab Sample ID: LCS 160-239662/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241797 — **Prep Batch: 239662**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			15.4	9.740		1.10	1.00	0.372	pCi/L	63	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*107*		*40 - 110*
Y Carrier	*80.7*		*40 - 110*

Lab Sample ID: LCSD 160-239662/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241797 — **Prep Batch: 239662**

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			15.4	10.46		1.17	1.00	0.402	pCi/L	68	56 - 140	0.32	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*
Y Carrier	*81.9*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-242194/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242431 — **Prep Batch: 242194**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	60.81	U	241	241	500	432	pCi/L	03/25/16 10:51	03/27/16 19:00	1

Method: 906.0 - Tritium, Total (LSC) (Continued)

Lab Sample ID: LCS 160-242194/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242431 — **Prep Batch: 242194**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium			4660	4565		715	500	410	pCi/L	98	74 - 114		

Lab Sample ID: 160-16333-B-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242431 — **Prep Batch: 242194**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium	146	U	4660	4115		673	500	410	pCi/L	88	67 - 130		

Lab Sample ID: 160-16333-B-1-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242431 — **Prep Batch: 242194**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Tritium	25500			24250		2510	500	439	pCi/L			0.25	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Lab Sample ID: MB 160-240784/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242366 — **Prep Batch: 240784**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.2218		0.106	0.108	1.00	0.112	pCi/L	03/16/16 09:50	03/24/16 18:20	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Thorium-229	*85.7*		*30 - 110*	*03/16/16 09:50*	*03/24/16 18:20*	*1*

Lab Sample ID: LCS 160-240784/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242377 — **Prep Batch: 240784**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Thorium-230			8.03	8.806		0.938	1.00	0.113	pCi/L	110	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Thorium-229	*90.8*		*30 - 110*

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-16308-D-1-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242305 — **Prep Batch: 240784**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Thorium-230	0.206			0.1600		0.0864	1.00	0.0800	pCi/L			0.25	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Thorium-229	*89.3*		*30 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-240794/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241974 — **Prep Batch: 240794**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.03617	U	0.0548	0.0549	1.00	0.0950	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-235/236	0.002143	U	0.0299	0.0299	1.00	0.0846	pCi/L	03/16/16 09:50	03/23/16 12:15	1
Uranium-238	0.02063	U	0.0292	0.0292	1.00	0.0309	pCi/L	03/16/16 09:50	03/23/16 12:15	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*87.3*		*30 - 110*	*03/16/16 09:50*	*03/23/16 12:15*	*1*

Lab Sample ID: LCS 160-240794/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241976 — **Prep Batch: 240794**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			12.7	13.02		1.32	1.00	0.0971	pCi/L	102	84 - 120		
Uranium-238			13.0	13.21		1.34	1.00	0.0316	pCi/L	101	83 - 121		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*85.2*		*30 - 110*

Lab Sample ID: 160-16308-D-1-D DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241978 — **Prep Batch: 240794**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Uranium-233/234	1.44			1.644		0.300	1.00	0.0853	pCi/L			0.35	1
Uranium-235/236	0.0656			0.02086	U	0.0389	1.00	0.0728	pCi/L			0.46	1
Uranium-238	1.05			0.9948		0.223	1.00	0.0695	pCi/L			0.13	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-16308-D-1-D DU
Matrix: Water
Analysis Batch: 241978

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 240794

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*81.8*		*30 - 110*

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

GC/MS VOA

Analysis Batch: 239988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Total/NA	Water	8260C	
160-16391-1 MS	PZ-101-SS	Total/NA	Water	8260C	
160-16391-1 MSD	PZ-101-SS	Total/NA	Water	8260C	
160-16391-2	PZ-102R-SS	Total/NA	Water	8260C	
160-16391-3	PZ-107-SS	Total/NA	Water	8260C	
160-16391-4	TRIP BLANK	Total/NA	Water	8260C	
LCS 160-239988/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-239988/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-239988/7	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 239422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Total/NA	Water	3510C	
160-16391-2	PZ-102R-SS	Total/NA	Water	3510C	
160-16391-3	PZ-107-SS	Total/NA	Water	3510C	
LCS 160-239422/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 160-239422/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-239422/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 240637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Total/NA	Water	8270D	239422
160-16391-2	PZ-102R-SS	Total/NA	Water	8270D	239422
160-16391-3	PZ-107-SS	Total/NA	Water	8270D	239422
LCS 160-239422/2-A	Lab Control Sample	Total/NA	Water	8270D	239422
LCSD 160-239422/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	239422
MB 160-239422/1-A	Method Blank	Total/NA	Water	8270D	239422

HPLC/IC

Analysis Batch: 242201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Total/NA	Water	300.0	
160-16391-1 - DL	PZ-101-SS	Total/NA	Water	300.0	
160-16391-1 - DL2	PZ-101-SS	Total/NA	Water	300.0	
160-16391-1 DU	PZ-101-SS	Total/NA	Water	300.0	
160-16391-1 DU - DL	PZ-101-SS	Total/NA	Water	300.0	
160-16391-1 DU - DL2	PZ-101-SS	Total/NA	Water	300.0	
160-16391-1 MS	PZ-101-SS	Total/NA	Water	300.0	
160-16391-1 MS - DL	PZ-101-SS	Total/NA	Water	300.0	
160-16391-1 MS - DL2	PZ-101-SS	Total/NA	Water	300.0	
160-16391-2	PZ-102R-SS	Total/NA	Water	300.0	
160-16391-2 - DL	PZ-102R-SS	Total/NA	Water	300.0	
160-16391-3	PZ-107-SS	Total/NA	Water	300.0	
160-16391-3 - DL	PZ-107-SS	Total/NA	Water	300.0	
160-16391-3 - DL2	PZ-107-SS	Total/NA	Water	300.0	
LCS 160-242201/4	Lab Control Sample	Total/NA	Water	300.0	
MB 160-242201/3	Method Blank	Total/NA	Water	300.0	

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Metals

Prep Batch: 239971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Total/NA	Water	3010A	
160-16391-1 MS	PZ-101-SS	Total/NA	Water	3010A	
160-16391-1 MSD	PZ-101-SS	Total/NA	Water	3010A	
LCS 160-239971/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-239971/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 240394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-2	PZ-102R-SS	Total/NA	Water	3010A	
160-16391-2 MS	PZ-102R-SS	Total/NA	Water	3010A	
160-16391-2 MSD	PZ-102R-SS	Total/NA	Water	3010A	
160-16391-3	PZ-107-SS	Total/NA	Water	3010A	
LCS 160-240394/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-240394/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 241336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16343-A-2-D MS	Matrix Spike	Total/NA	Water	7470A	
160-16343-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
160-16391-1	PZ-101-SS	Total/NA	Water	7470A	
160-16391-2	PZ-102R-SS	Total/NA	Water	7470A	
160-16391-3	PZ-107-SS	Total/NA	Water	7470A	
LCS 160-241336/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 160-241336/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 241433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16343-A-2-D MS	Matrix Spike	Total/NA	Water	7470A	241336
160-16343-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	241336
160-16391-1	PZ-101-SS	Total/NA	Water	7470A	241336
160-16391-2	PZ-102R-SS	Total/NA	Water	7470A	241336
160-16391-3	PZ-107-SS	Total/NA	Water	7470A	241336
LCS 160-241336/2-A	Lab Control Sample	Total/NA	Water	7470A	241336
MB 160-241336/1-A	Method Blank	Total/NA	Water	7470A	241336

Analysis Batch: 243457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Total/NA	Water	6010C	239971
160-16391-1 MS	PZ-101-SS	Total/NA	Water	6010C	239971
160-16391-1 MSD	PZ-101-SS	Total/NA	Water	6010C	239971
160-16391-2	PZ-102R-SS	Total/NA	Water	6010C	240394
160-16391-2 MS	PZ-102R-SS	Total/NA	Water	6010C	240394
160-16391-2 MSD	PZ-102R-SS	Total/NA	Water	6010C	240394
160-16391-3	PZ-107-SS	Total/NA	Water	6010C	240394
LCS 160-239971/2-A	Lab Control Sample	Total/NA	Water	6010C	239971
LCS 160-240394/2-A	Lab Control Sample	Total/NA	Water	6010C	240394
MB 160-239971/1-A	Method Blank	Total/NA	Water	6010C	239971
MB 160-240394/1-A	Method Blank	Total/NA	Water	6010C	240394

Metals (Continued)

Analysis Batch: 244889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Total/NA	Water	6010C	239971
160-16391-1 MS	PZ-101-SS	Total/NA	Water	6010C	239971
160-16391-1 MSD	PZ-101-SS	Total/NA	Water	6010C	239971
160-16391-2	PZ-102R-SS	Total/NA	Water	6010C	240394
160-16391-2 MS	PZ-102R-SS	Total/NA	Water	6010C	240394
160-16391-2 MSD	PZ-102R-SS	Total/NA	Water	6010C	240394
160-16391-3	PZ-107-SS	Total/NA	Water	6010C	240394
LCS 160-239971/2-A	Lab Control Sample	Total/NA	Water	6010C	239971
LCS 160-240394/2-A	Lab Control Sample	Total/NA	Water	6010C	240394
MB 160-239971/1-A	Method Blank	Total/NA	Water	6010C	239971
MB 160-240394/1-A	Method Blank	Total/NA	Water	6010C	240394

General Chemistry

Analysis Batch: 239473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16336-A-1 DU	Duplicate	Total/NA	Water	160.1	
160-16391-1 - DL	PZ-101-SS	Total/NA	Water	160.1	
160-16391-2	PZ-102R-SS	Total/NA	Water	160.1	
160-16391-3 - DL	PZ-107-SS	Total/NA	Water	160.1	
LCS 160-239473/2	Lab Control Sample	Total/NA	Water	160.1	
MB 160-239473/1	Method Blank	Total/NA	Water	160.1	

Prep Batch: 239667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-H-1-B DU	Duplicate	Total/NA	Water	410.4	
160-16333-L-3-B MS	Matrix Spike	Total/NA	Water	410.4	
160-16391-1	PZ-101-SS	Total/NA	Water	410.4	
160-16391-2	PZ-102R-SS	Total/NA	Water	410.4	
160-16391-3	PZ-107-SS	Total/NA	Water	410.4	
LCS 160-239667/4-A	Lab Control Sample	Total/NA	Water	410.4	
MB 160-239667/3-A	Method Blank	Total/NA	Water	410.4	

Analysis Batch: 239798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-H-1-B DU	Duplicate	Total/NA	Water	410.4	239667
160-16333-L-3-B MS	Matrix Spike	Total/NA	Water	410.4	239667
160-16391-1	PZ-101-SS	Total/NA	Water	410.4	239667
160-16391-2	PZ-102R-SS	Total/NA	Water	410.4	239667
160-16391-3	PZ-107-SS	Total/NA	Water	410.4	239667
LCS 160-239667/4-A	Lab Control Sample	Total/NA	Water	410.4	239667
MB 160-239667/3-A	Method Blank	Total/NA	Water	410.4	239667

Analysis Batch: 240661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-H-1 DU	Duplicate	Total/NA	Water	353.1 Preserved	
160-16308-H-1 MS	Matrix Spike	Total/NA	Water	353.1 Preserved	
160-16391-1	PZ-101-SS	Total/NA	Water	353.1 Preserved	
160-16391-2	PZ-102R-SS	Total/NA	Water	353.1 Preserved	
160-16391-3	PZ-107-SS	Total/NA	Water	353.1 Preserved	

General Chemistry (Continued)

Analysis Batch: 240661 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-240661/16	Lab Control Sample	Total/NA	Water	353.1 Preserved	
MB 160-240661/15	Method Blank	Total/NA	Water	353.1 Preserved	

Analysis Batch: 242129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-J-1 DU	Duplicate	Total/NA	Water	415.1	
160-16308-J-1 MS	Matrix Spike	Total/NA	Water	415.1	
160-16391-1 - DL	PZ-101-SS	Total/NA	Water	415.1	
160-16391-2	PZ-102R-SS	Total/NA	Water	415.1	
160-16391-3	PZ-107-SS	Total/NA	Water	415.1	
LCS 160-242129/5	Lab Control Sample	Total/NA	Water	415.1	
MB 160-242129/4	Method Blank	Total/NA	Water	415.1	

Analysis Batch: 242771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16344-D-1 DU	Duplicate	Total/NA	Water	350.1	
160-16344-D-1 MS	Matrix Spike	Total/NA	Water	350.1	
160-16391-1 - DL	PZ-101-SS	Total/NA	Water	350.1	
160-16391-1 MS - DL	PZ-101-SS	Total/NA	Water	350.1	
160-16391-2	PZ-102R-SS	Total/NA	Water	350.1	
160-16391-3 - DL	PZ-107-SS	Total/NA	Water	350.1	
LCS 160-242771/13	Lab Control Sample	Total/NA	Water	350.1	
MB 160-242771/12	Method Blank	Total/NA	Water	350.1	

Rad

Prep Batch: 239412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-3	PZ-107-SS	Total/NA	Water	PrecSep-21	
500-108286-C-3-B DU	Duplicate	Total/NA	Water	PrecSep-21	
LCS 160-239412/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-239412/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Filtration Batch: 239454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Dissolved	Water	Filtration	
160-16391-2	PZ-102R-SS	Dissolved	Water	Filtration	
160-16391-3	PZ-107-SS	Dissolved	Water	Filtration	

Prep Batch: 239469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-3	PZ-107-SS	Total/NA	Water	PrecSep_0	
500-108286-C-3-D DU	Duplicate	Total/NA	Water	PrecSep_0	
LCS 160-239469/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-239469/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 239583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Dissolved	Water	PrecSep-21	239454
160-16391-2	PZ-102R-SS	Dissolved	Water	PrecSep-21	239454

Rad (Continued)

Prep Batch: 239583 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-3	PZ-107-SS	Dissolved	Water	PrecSep-21	239454
LCS 160-239583/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-239583/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
MB 160-239583/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 239587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Total/NA	Water	PrecSep-21	
160-16391-2	PZ-102R-SS	Total/NA	Water	PrecSep-21	
500-108286-C-9-B DU	Duplicate	Total/NA	Water	PrecSep-21	
LCS 160-239587/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-239587/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 239659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Total/NA	Water	PrecSep_0	
160-16391-2	PZ-102R-SS	Total/NA	Water	PrecSep_0	
500-108286-C-9-D DU	Duplicate	Total/NA	Water	PrecSep_0	
LCS 160-239659/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-239659/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 239662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-1	PZ-101-SS	Dissolved	Water	PrecSep_0	239454
160-16391-2	PZ-102R-SS	Dissolved	Water	PrecSep_0	239454
160-16391-3	PZ-107-SS	Dissolved	Water	PrecSep_0	239454
LCS 160-239662/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-239662/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
MB 160-239662/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 240784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-D-1-B DU	Duplicate	Total/NA	Water	ExtChrom	
160-16391-1	PZ-101-SS	Total/NA	Water	ExtChrom	
160-16391-2	PZ-102R-SS	Total/NA	Water	ExtChrom	
160-16391-3	PZ-107-SS	Total/NA	Water	ExtChrom	
LCS 160-240784/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
MB 160-240784/1-A	Method Blank	Total/NA	Water	ExtChrom	

Prep Batch: 240794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-D-1-D DU	Duplicate	Total/NA	Water	ExtChrom	
160-16391-1	PZ-101-SS	Total/NA	Water	ExtChrom	
160-16391-2	PZ-102R-SS	Total/NA	Water	ExtChrom	
160-16391-3	PZ-107-SS	Total/NA	Water	ExtChrom	
LCS 160-240794/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
MB 160-240794/1-A	Method Blank	Total/NA	Water	ExtChrom	

Prep Batch: 242194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16333-B-1-B DU	Duplicate	Total/NA	Water	LSC_Dist_Susp	

Rad (Continued)

Prep Batch: 242194 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16333-B-2-B MS	Matrix Spike	Total/NA	Water	LSC_Dist_Susp	
160-16391-1	PZ-101-SS	Total/NA	Water	LSC_Dist_Susp	
160-16391-2	PZ-102R-SS	Total/NA	Water	LSC_Dist_Susp	
160-16391-3	PZ-107-SS	Total/NA	Water	LSC_Dist_Susp	
LCS 160-242194/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
MB 160-242194/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	12DCE	TOL
Lab Sample ID	Client Sample ID	(71-139)	(80-121)	(76-121)	(80-129)
160-16391-1	PZ-101-SS	101	103	104	100
160-16391-1 MS	PZ-101-SS	91	103	105	97
160-16391-1 MSD	PZ-101-SS	92	104	108	95
160-16391-2	PZ-102R-SS	102	107	111	103
160-16391-3	PZ-107-SS	98	105	111	98
160-16391-4	TRIP BLANK	95	100	99	100
LCS 160-239988/4	Lab Control Sample	91	101	99	97
LCSD 160-239988/5	Lab Control Sample Dup	93	99	98	97
MB 160-239988/7	Method Blank	97	100	97	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(43-108)	(15-59)	(50-101)	(10-50)	(21-97)	(37-120)
160-16391-1	PZ-101-SS	92	32	87	18	52	103
160-16391-2	PZ-102R-SS	98	31	90	17	63	107
160-16391-3	PZ-107-SS	91	31	85	18	56	103
LCS 160-239422/2-A	Lab Control Sample	129 X	65 X	120 X	43	132 X	145 X
LCSD 160-239422/3-A	Lab Control Sample Dup	106	56	99	38	109 X	123 X
MB 160-239422/1-A	Method Blank	121 X	60 X	114 X	39	125 X	128 X

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Tracer/Carrier Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16391-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ba (40-110)						
160-16391-1	PZ-101-SS	96.9						
160-16391-2	PZ-102R-SS	90.0						
160-16391-3	PZ-107-SS	99.1						
500-108286-C-3-B DU	Duplicate	94.3						
500-108286-C-9-B DU	Duplicate	97.7						
LCS 160-239412/2-A	Lab Control Sample	98.6						
LCS 160-239583/2-A	Lab Control Sample	107						
LCS 160-239587/2-A	Lab Control Sample	104						
LCSD 160-239583/3-A	Lab Control Sample Dup	103						
MB 160-239412/1-A	Method Blank	107						
MB 160-239583/1-A	Method Blank	103						
MB 160-239587/1-A	Method Blank	98.0						

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Dissolved**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ba (40-110)						
160-16391-1	PZ-101-SS	109						
160-16391-2	PZ-102R-SS	93.4						
160-16391-3	PZ-107-SS	99.1						

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)					
160-16391-1	PZ-101-SS	96.9	84.5					
160-16391-2	PZ-102R-SS	90.0	90.5					
160-16391-3	PZ-107-SS	99.1	83.0					
500-108286-C-3-D DU	Duplicate	94.3	84.1					
500-108286-C-9-D DU	Duplicate	97.7	82.6					
LCS 160-239469/2-A	Lab Control Sample	98.6	83.7					
LCS 160-239659/2-A	Lab Control Sample	104	87.9					
LCS 160-239662/2-A	Lab Control Sample	107	80.7					
LCSD 160-239662/3-A	Lab Control Sample Dup	103	81.9					
MB 160-239469/1-A	Method Blank	107	81.5					
MB 160-239659/1-A	Method Blank	98.0	86.0					
MB 160-239662/1-A	Method Blank	103	80.4					

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Dissolved**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
160-16391-1	PZ-101-SS	109	81.9
160-16391-2	PZ-102R-SS	93.4	84.1
160-16391-3	PZ-107-SS	99.1	84.1

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Th-229 (30-110)
160-16308-D-1-B DU	Duplicate	89.3
160-16391-1	PZ-101-SS	85.1
160-16391-2	PZ-102R-SS	80.8
160-16391-3	PZ-107-SS	93.5
LCS 160-240784/2-A	Lab Control Sample	90.8
MB 160-240784/1-A	Method Blank	85.7

Tracer/Carrier Legend

Th-229 = Thorium-229

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-16308-D-1-D DU	Duplicate	81.8
160-16391-1	PZ-101-SS	88.5
160-16391-2	PZ-102R-SS	99.4
160-16391-3	PZ-107-SS	90.9
LCS 160-240794/2-A	Lab Control Sample	85.2
MB 160-240794/1-A	Method Blank	87.3

Tracer/Carrier Legend

U-232 = Uranium-232

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 160-16405-1
Client Project/Site: Groundwater Samples

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 160-16405-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Missouri Attorney General's Office

Project: Groundwater Samples

Report Number: 160-16405-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica St. Louis attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 03/07/2016; the samples arrived in good condition, and properly preserved. The temperatures of the 3 coolers at receipt time were 18.8º C, 20.8º C and 23.9º C.

Receipt Exceptions
Received 1 Lp unpreserved with the label reading PZ-212-SD @ 10:05. ID information was requested and clarified. (# PZ-212-SS) PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3), PZ-203-SS (160-16405-4), LCS-6B (160-16405-5) and TRIP BLANK (160-16405-6)

The pH of all preserved bottles were ~ 7. Vials were not checked for pH. MW-1204 (160-16405-3)

VOLATILE ORGANIC COMPOUNDS (GC MS)
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3), PZ-203-SS (160-16405-4), LCS-6B (160-16405-5) and TRIP BLANK (160-16405-6) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 03/10/2016, 03/11/2016 and 03/20/2016.

Analytical Batch: 239988

Job ID: 160-16405-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

The continuing calibration verification (CCV) associated with batch 160-239988 recovered above the upper control limit for Methyl bromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. (CCVIS 160-239988/3)

The following compounds did not meet the minimum relative response factor limits in the continuing calibration verification (CCV) associated with batch 160-239988: Acetone and Methyl Ethyl Ketone. A low-level LOQV was analyzed at the reporting limit (5ug/L) and the affected analytes were detected. Target analytes recovering above the reporting limit will be qualified and reported. (CCVIS 160-239988/3)

According to the Chain of Custody samples MW-1204 (160-16405-3) and LCS-6B (160-16405-5) were to be preserved with Hydrochloric acid. Upon preparation of the samples for analysis it was discovered that the pH was greater than 2. Due to the potential for loss of volatile analytes the pH is not checked upon arrival of the samples at the laboratory. The samples were analyzed within the 7 day hold time associated with unpreserved Volatiles samples in batch 160-239988.

The following sample was analyzed at reduced volume due to high concentrations of target analytes: MW-1204 (160-16405-3). The reporting limits have been elevated by the appropriate factor.

Analytical Batch: 241303
The following compounds did not meet the minimum relative response factor limits in the continuing calibration verification (CCV) associated with batch 160-241303: Acetone and Methyl Ethyl Ketone. A low-level LOQV was analyzed at the reporting limit (5ug/L) and the affected analytes were detected. Target analytes recovering above the reporting limit will be qualified and reported. (CCVIS 160-241303/2)

The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 160-241303 was outside control limits for Methyl bromide. The MS/MSD recoveries are within QC limits, and sample matrix interference is suspected. (160-16445-G-1 MSD)

The following sample was analyzed at reduced volume due to th high concentration of a target analyte: Methyl Ethyl Ketone. The reporting limits have been elevated by the appropriate factor. LCS-6B (160-16405-5)

According to the COC, sample was presumed to be preserved to a pH < 2. Due to the potential loss of volatile constituents, VOA vials are not checked for pH preservation until the time of analysis. Sample pH was not less than 2. Sample was analyzed outside the 7 day, unpreserved, holding time. This analysis is a dilution for Methyl Ethyl Ketone only. The original analysis was performed within the unpreserved Holding Time. The results of the dilute re-analysis (190ppb) is comparable to the original analysis (200ppb). The original analysis was slightly above the upper calibration limit; therefore, the re-analysis is reported LCS-6B (160-16405-5)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Samples MW-1204 (160-16405-3)[50X] and LCS-6B (160-16405-5)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC MS)
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3), PZ-203-SS (160-16405-4) and LCS-6B (160-16405-5) were analyzed for semivolatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 03/11/2016 and analyzed on 03/24/2016, 04/05/2016 and 04/06/2016.

Analytical Batch: 241580
Famphur recovered outside initial calibration criteria at 102.6 % RSD. The ICV recovered low at 77.9 %D. The CCV recovered low at 74.8 %D. Hexachlorophene recovered outside the initial calibration at 56.4 % RSD. Hexachlorophene recovered low in the CCV at 41.3 %D. These compounds are poor responding compounds and will be estimated in the samples associated with this calibration. The data is reported with this narrative. (CCV 160-241580/4), (CCV 160-241580/7), (LCS 160-240162/2-A), (LCSD 160-240162/3-A), (MB 160-240162/1-A), (160-16418-M-3-A MS) and (160-16418-P-3-A MSD)

2,4-Dinitrophenol and Hexachlorocyclopentadiene recovered low and Benzo[b]fluoranthene and/or Benzo[k]fluoranthene recovered high in the LCS/LCSD. Phenol and 4-Nitrophenol recovered low in the MS/MSD and the RPD failed between the MS/MSD for 2,4-Dinitrophenol and 4-Nitrophenol. The samples are outside 2X holding time and will not be re-extracted. The data is reported with this narrative. (LCS

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160-240162/2-A), (LCSD 160-240162/3-A), (160-16418-M-3-A MS) and (160-16418-P-3-A MSD)

Analytical Batch: 242481
This reanalysis is for Kepone only. (MB 160-240162/1-A) and (160-16418-Q-3-A)

Analytical Batch: 242140
Famphur recovered outside initial calibration criteria at 102.6 % RSD. The ICV recovered low at 77.9 %D. The CCV recovered low at 83.0 %D. Hexachlorophene recovered outside the initial calibration at 56.4 % RSD. Hexachlorophene recovered low in the CCV at 45.1 %D. These compounds are poor responding compounds and will be estimated in the samples associated with this calibration. The data is reported with this narrative. PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3), PZ-203-SS (160-16405-4), LCS-6B (160-16405-5), (CCV 160-242140/4) and (CCV 160-242140/7)

Surrogates recovered outside QC criteria in the following samples. The samples are outside 2X holding time and will not be re-extracted. The data is reported with this narrative. MW-1204 (160-16405-3) and LCS-6B (160-16405-5)

Analytical Batch: 244334
The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-1204 (160-16405-3) and LCS-6B (160-16405-5). Elevated reporting limits (RLs) are provided.

Analytical Batch: 244337
This reanalysis is for Kepone only. PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3), PZ-203-SS (160-16405-4) and LCS-6B (160-16405-5)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3), PZ-203-SS (160-16405-4) and LCS-6B (160-16405-5) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 03/14/2016 and 04/08/2016 and analyzed on 04/02/2016, 04/06/2016 and 04/11/2016.

Prep Batch: 240394
Due to difficult sample matrix a dilution was performed for the following samples: PZ-212-SS (160-16405-2) These dilutions were prepared as follows: 10mL to 50 mL

Analytical Batch: 243457
The low level check standard recovery associated with batch 160-243457 is outside the acceptance criteria for the following analyte(s): boron. The CCVL bracketing the samples were within acceptable QC criteria therefore original results will be reported. (CRI 160-243457/20)

The initial calibration verification (ICV) result for batch 160-243457 was above the upper control limit for phosphorus. Sample results were below the reporting limit, and have been reported as qualified data. (ICV 160-243457/18)

The following samples was diluted to bring the concentration of target analytes within the calibration range: PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3), PZ-203-SS (160-16405-4), LCS-6B (160-16405-5), (160-16391-F-2-A ^5), (160-16391-F-2-B MS ^), (160-16391-F-2-C MSD) and (160-16391-F-2-A SD ^). Elevated reporting limits (RLs) are provided.

The method blank for preparation batch 160-240394 and analytical batch 160-243457 contained iron above reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank or lesser than the reporting limit. (MB 160-240394/1-A)

CaHard, MgHard and Phosphorus were detected in method blank MB 160-240394/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Analytical Batch: 244889

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The following samples was diluted to bring the concentration of target analytes within the calibration range: PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3), PZ-203-SS (160-16405-4), LCS-6B (160-16405-5), (160-16391-F-2-A ^5), (160-16391-F-2-B MS ^), (160-16391-F-2-C MSD) and (160-16391-F-2-A SD ^). Elevated reporting limits (RLs) are provided.

Analytical Batch: 245332
The following samples were diluted due to the nature of the sample matrix. Digested sample was yellow in color indicating potential matrix interference. Additionally the samples were high in salts which can cause internal standard and instrument QC failure.: LCS-6B (160-16405-5), (160-16405-E-5-D MS ^), (160-16405-E-5-E MSD) and (160-16405-E-5-C SD ^). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3), PZ-203-SS (160-16405-4) and LCS-6B (160-16405-5) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 03/21/2016.

Analytical Batch: 241336
Due to the difficult matrix a dilution was required. LCS-6B (160-16405-5)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 03/10/2016.

Analytical Batch: 239853
The following samples in TDS batch 160-239853 were diluted to bring the concentration of target analytes within the calibration range: MW-1204 (160-16405-3). Elevated reporting limits (RLs) are provided.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS, ION CHROMATOGRAPHY
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for Anions, Ion Chromatography in accordance with EPA Method 300.0. The samples were analyzed on 03/26/2016.

Analytical Batch: 242201
The following samples in Anion batch 160-242201 were diluted to bring the concentrations of target analytes within the calibration range: PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4). Elevated reporting limits (RLs) are provided.

The following sample and sample duplicate in Anion batch 160-242201 have an RPD that is outside acceptance limits for Sulfate (30%). However, RPD is not applicable for values near the reporting limit. As the sample and duplicate are less than 5x the RL and have values within the RL of each other, the results are reported with this narration.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

AMMONIA
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for ammonia in accordance with EPA Method 350.1. The samples were analyzed on 04/01/2016.

Analytical Batch: 319197
The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 280-319197 was outside control limits. Sample matrix interference is suspected.

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Laboratory: TestAmerica St. Louis (Continued)

The following sample was improperly preserved in the field: MW-1204 (160-16405-3). The preservative used is not compatible with the analytes requested.

The following sample for Ammonia 280-319197 was improperly preserved in the field: MW-1204 (160-16405-3). The method requires that the sample be preserved to pH<2. The pH was 4. It was preserved to pH<2 at the bench and analyzed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITRATE-NITRITE AS NITROGEN
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 04/01/2016.

Analytical Batch: 319275
A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: A second order calibration curve was used to minimize high end bias. For nitrate, nitrite batch 280-319275.

The following sample was improperly preserved in the field: MW-1204 (160-16405-3). This analysis requires the sample to be preserved to a pH of <2. The sample was received at a pH of approximately 4. The sample was preserved to a pH of <2 at the bench and analyzed. For nitrate, nitrite batch 280-319275.

The following sample for Nitrate Nitrite as N batch 280-319275 was diluted due to the nature of the sample matrix, which was turbid/ dark in color: MW-1204 (160-16405-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CHEMICAL OXYGEN DEMAND
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for chemical oxygen demand in accordance with EPA Method 410.4. The samples were prepared on 03/16/2016 and analyzed on 03/17/2016.

Analytical Batch: 240893
The following samples in COD batch 160-240893 were diluted to bring the concentration of target analytes within the calibration range: MW-1204 (160-16405-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL ORGANIC CARBON
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for total organic carbon in accordance with EPA Method 415.1. The samples were analyzed on 03/23/2016 and 03/24/2016.

Analytical Batch: 242129
The following samples in TOC batch 160-242129 were diluted to bring the concentrations of the target analyte within the calibration range: MW-1204 (160-16405-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 (GFPC)-DISSOLVED
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were prepared on 03/11/2016 and analyzed on 04/01/2016.

Prep Batch: 240181
Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

The following samples were prepared at a reduced aliquot due to sediment and discoloration in the sample: MW-1204 (160-16405-3).

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No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 (GFPC)
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were prepared on 03/10/2016 and analyzed on 04/03/2016.

Prep Batch: 239995
The following samples were prepared at a reduced aliquot: PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2) and MW-1204 (160-16405-3). Lot 160-16399 were reduced due to historical matrix interference issues from high amounts of native barium in the samples from this project. Samples 160-16405-1, 160-16405-2, 160-16405-3, and 160-16428-4 were reduced due to sediment and discoloration in the sample.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228 (GFPC)-DISSOLVED
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for Radium-228 (GFPC)-Dissolved in accordance with EPA 904. The samples were prepared on 03/10/2016 and analyzed on 03/15/2016.

Prep Batch: 239979
The following samples were prepared at a reduced aliquot due to sediment and discoloration in the sample: MW-1204 (160-16405-3).

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

The radium-228 detection goal was not met for the following samples due to the reduced sample volume attributed to the presence of matrix interferences (see prep NCM 80200): MW-1204 (160-16405-3). Analytical results are reported with the detection limit achieved.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228 (GFPC)
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for Radium-228 (GFPC) in accordance with EPA 904. The samples were prepared on 03/11/2016 and analyzed on 04/01/2016.

Prep Batch: 240185
The following samples were prepared at a reduced aliquot: PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2) and MW-1204 (160-16405-3). Lot 160-16399 were reduced due to historical matrix interference issues from high amounts of native barium in the samples from this project. Samples 160-16405-1, 160-16405-2, 160-16405-3, and 160-16428-4 were reduced due to sediment and discoloration in the sample.

The radium-228 detection goal was not met for the following samples due to the reduced sample volume attributed to the presence of matrix interferences (see pre NCM 80209): PZ-212-SS (160-16405-2), MW-1204 (160-16405-3), (160-16399-A-16-D), (160-16399-A-16-E MS) and (160-16399-A-16-F MSD). Analytical results are reported with the detection limit achieved.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRITIUM, TOTAL (LSC)
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for Tritium, Total (LSC) in accordance with USEPA 906.0. The samples were prepared on 03/29/2016 and analyzed on 03/30/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC THORIUM (ALPHA SPECTROMETRY)
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for

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Laboratory: TestAmerica St. Louis (Continued)

Isotopic Thorium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 03/22/2016 and analyzed on 03/29/2016.

Prep Batch: 241591
Sample is pitch black, therefore a reduced aliquot was used to prevent matrix interference. MW-1204 (160-16405-3)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples PZ-212-SD (160-16405-1), PZ-212-SS (160-16405-2), MW-1204 (160-16405-3) and PZ-203-SS (160-16405-4) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 03/22/2016 and analyzed on 03/29/2016.

Prep Batch: 241595
Sample is pitch black, therefore a reduced aliquot was used to prevent matrix interference. MW-1204 (160-16405-3)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: LYNN MILBERG	Lab PM: Lambert-Sykes, Chenise Y	Carrier Tracking No(s):	COC No: 160-3827-1868.1
Client Contact: Brenna McDonald	Phone: 573-453-4329	E-Mail: chenise.lambert-sykes@testamericainc.com		Page: Page 1 of 1
Company: Missouri Attorney General's Office				Job #:
Address: PO BOX 899	Due Date Requested:			
City: Jefferson City	TAT Requested (days):			
State, Zip: MO, 65102				
Phone: 573-368-2163(Tel)	PO #: Purchase Order not required			
Email: brenna.mcdonald@dnr.mo.gov	WO #:			
Project Name: Groundwater Samples	Project #: 16005117			
Site: Bridgeton landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1, 353.1_Pres, 410.4	160.1_Calcd, 300_ORGFM_28D	6010C, 7470A	415.1 - Total Organic Carbon	8260C - (MOD) OLM 4.2	8270D - (MOD) Appendix IX Semi-Volatiles	903.0, 904.0, A01R_Th, A01R_U	903.0, 904.0	906.0 - Tritium	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	D	S	A	N	D	N	N		
PZ-212-SD	3/7/16	0842	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓	15	
PZ-212-SS	3/7/16	1005	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓	15	
MW-1204	3/7/16	1255	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓	15	Leachate; VOAs unpreserved
PZ-203-SS	3/7/16	1439	G	Water	N		✓	✓	✓	✓	✓	✓	✓	✓	✓	15	
LCS-6A+B	3/7/16	1610	G	Water	N				✓		✓	✓				5	Leachate - VOAs unpreserved
TRIPBLANK	3/7/16	0800	G	Water	N						✓					2	

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	3-7-16 1640	MDNR	[signature]	3/7/16 1645	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date		Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

160-16405 Chain of Custody

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone (314) 298-8566 Fax (314) 298-8757

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lambert-Sykes, Chenise Y	Carrier Tracking No(s):	COC No: 160-81040.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: chenise.lambert-sykes@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 160-16405-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 3/17/2016			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Groundwater Samples	Project #: 16005117			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	353.2_Pres	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
PZ-212-SD (160-16405-1)	3/7/16	08:42 Central		Water			X		Please run QC on client's sample.
PZ-212-SS (160-16405-2)	3/7/16	10:05 Central		Water			X		Please run QC on client's sample.
MW-1204 (160-16405-3)	3/7/16	12:55 Central		Water			X		Please run QC on client's sample.
PZ-203-SS (160-16405-4)	3/7/16	14:39 Central		Water			X		Please run QC on client's sample.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Jeff Clarke	Date/Time: 3-30-16 1700	Company: TASL	Received by: [signature]	Date/Time: 03/31/16 1025	Company: TAD
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.1/-0.2 IR#7 transfered by JT 03/31/16

Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-16405-1

Login Number: 16405
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	False	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	The pH of all preserved bottles were ~ 7. Vials were not checked for pH.
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	Sample 160-16405-5 was received with headspace in 3 of 3 sample vials.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Missouri Attorney General's Office

Job Number: 160-16405-1

Login Number: 16405
List Number: 2
Creator: True, Joshua A

List Source: TestAmerica Denver
List Creation: 03/31/16 12:18 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Not requested on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	MS/MSD RPD exceeds control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

HPLC/IC

Qualifier	Qualifier Description
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
G	The Sample MDC is greater than the requested RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SL
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SL
300.0	Anions, Ion Chromatography	MCAWW	TAL SL
6010C	Metals (ICP)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL SL
350.1	Nitrogen, Ammonia	MCAWW	TAL DEN
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
410.4	COD	MCAWW	TAL SL
415.1	TOC	MCAWW	TAL SL
903.0	Radium-226 (GFPC)	EPA	TAL SL
904.0	Radium-228 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Thorium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-16405-1	PZ-212-SD	Water	03/07/16 08:42	03/07/16 16:45
160-16405-2	PZ-212-SS	Water	03/07/16 10:05	03/07/16 16:45
160-16405-3	MW-1204	Water	03/07/16 12:55	03/07/16 16:45
160-16405-4	PZ-203-SS	Water	03/07/16 14:39	03/07/16 16:45
160-16405-5	LCS-6B	Water	03/07/16 16:10	03/07/16 16:45
160-16405-6	TRIP BLANK	Water	03/07/16 08:00	03/07/16 16:45

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: PZ-212-SD

Date Collected: 03/07/16 08:42
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/11/16 00:13	1
Acetonitrile	ND		50	7.3	ug/L			03/11/16 00:13	1
Acrolein	ND		50	3.1	ug/L			03/11/16 00:13	1
Acrylonitrile	ND		50	1.7	ug/L			03/11/16 00:13	1
Allyl chloride	ND		10	0.39	ug/L			03/11/16 00:13	1
Benzene	ND		5.0	0.25	ug/L			03/11/16 00:13	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/11/16 00:13	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/11/16 00:13	1
Bromoform	ND		5.0	0.37	ug/L			03/11/16 00:13	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/11/16 00:13	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/11/16 00:13	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/11/16 00:13	1
Chloroethane	ND		10	0.38	ug/L			03/11/16 00:13	1
Chloroform	ND		5.0	0.15	ug/L			03/11/16 00:13	1
Chloroprene	ND		5.0	0.39	ug/L			03/11/16 00:13	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/11/16 00:13	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/11/16 00:13	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/11/16 00:13	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/11/16 00:13	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/11/16 00:13	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/11/16 00:13	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/11/16 00:13	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/11/16 00:13	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/11/16 00:13	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/11/16 00:13	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/11/16 00:13	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/11/16 00:13	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/11/16 00:13	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/11/16 00:13	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/11/16 00:13	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/11/16 00:13	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/11/16 00:13	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/11/16 00:13	1
2-Hexanone	ND		20	0.59	ug/L			03/11/16 00:13	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/11/16 00:13	1
Methacrylonitrile	ND		50	2.1	ug/L			03/11/16 00:13	1
Methyl bromide	ND		10	0.40	ug/L			03/11/16 00:13	1
Methyl chloride	ND		10	0.55	ug/L			03/11/16 00:13	1
Methylene bromide	ND		5.0	0.41	ug/L			03/11/16 00:13	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/11/16 00:13	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/11/16 00:13	1
Methyl iodide	ND		5.0	1.5	ug/L			03/11/16 00:13	1
Methyl methacrylate	ND		10	0.51	ug/L			03/11/16 00:13	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/11/16 00:13	1
Propionitrile	ND		50	2.4	ug/L			03/11/16 00:13	1
Styrene	ND		5.0	0.35	ug/L			03/11/16 00:13	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/11/16 00:13	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/11/16 00:13	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/11/16 00:13	1

Client Sample ID: PZ-212-SD

Date Collected: 03/07/16 08:42
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		5.0	1.0	ug/L			03/11/16 00:13	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/11/16 00:13	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/11/16 00:13	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/11/16 00:13	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/11/16 00:13	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/11/16 00:13	1
Trichloroethene	ND		5.0	0.29	ug/L			03/11/16 00:13	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/11/16 00:13	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/11/16 00:13	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/11/16 00:13	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/11/16 00:13	1
Xylenes, Total	ND		10	0.85	ug/L			03/11/16 00:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*71 - 139*		*03/11/16 00:13*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 121*		*03/11/16 00:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*76 - 121*		*03/11/16 00:13*	*1*
Toluene-d8 (Surr)	*102*		*80 - 129*		*03/11/16 00:13*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Acenaphthylene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Acetophenone	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2-Acetylaminofluorene	ND		95	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
4-Aminobiphenyl	ND		48	1.0	ug/L		03/11/16 14:43	03/24/16 19:36	1
Anthracene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Benzo[a]anthracene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Benzo[a]pyrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Benzo[b]fluoranthene	ND	*	9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Benzo[g,h,i]perylene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Benzo[k]fluoranthene	ND	*	9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Benzyl alcohol	ND		9.5	2.9	ug/L		03/11/16 14:43	03/24/16 19:36	1
Bis(2-chloroethoxy)methane	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Bis(2-chloroethyl)ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
bis(2 chloro-1-methylethyl) ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Bis(2-ethylhexyl) phthalate	ND		9.5	1.8	ug/L		03/11/16 14:43	03/24/16 19:36	1
4-Bromophenyl phenyl ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Butyl benzyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
4-Chloroaniline	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 19:36	1
Chlorobenzilate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
4-Chloro-3-methylphenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2-Chloronaphthalene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2-Chlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
4-Chlorophenyl phenyl ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Chrysene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Diallate	ND		19	1.9	ug/L		03/11/16 14:43	03/24/16 19:36	1
Dibenz(a,h)anthracene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Dibenzofuran	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
3,3'-Dichlorobenzidine	ND		48	1.2	ug/L		03/11/16 14:43	03/24/16 19:36	1

Client Sample ID: PZ-212-SD

Date Collected: 03/07/16 08:42
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2,6-Dichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Diethyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Dimethoate	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
3,3'-Dimethylbenzidine	ND		48	2.5	ug/L		03/11/16 14:43	03/24/16 19:36	1
2,4-Dimethylphenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Dimethyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Di-n-butyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
1,3-Dinitrobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
1,4-Dinitrobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
4,6-Dinitro-2-methylphenol	ND		9.5	1.2	ug/L		03/11/16 14:43	03/24/16 19:36	1
2,4-Dinitrophenol	ND	*	48	1.9	ug/L		03/11/16 14:43	03/24/16 19:36	1
2,4-Dinitrotoluene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2,6-Dinitrotoluene	ND		9.5	2.1	ug/L		03/11/16 14:43	03/24/16 19:36	1
Di-n-octyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Dinoseb	ND		19	1.9	ug/L		03/11/16 14:43	03/24/16 19:36	1
Diphenylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Disulfoton	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Ethyl methanesulfonate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Famphur	ND		95	1.6	ug/L		03/11/16 14:43	03/24/16 19:36	1
Fluoranthene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Fluorene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Hexachlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Hexachlorobutadiene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Hexachlorocyclopentadiene	ND	*	9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Hexachloroethane	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Hexachlorophene	ND		240	9.5	ug/L		03/11/16 14:43	03/24/16 19:36	1
Hexachloropropene	ND		95	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Indeno[1,2,3-cd]pyrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Isodrin	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Isophorone	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Isosafrole	ND		19	4.8	ug/L		03/11/16 14:43	03/24/16 19:36	1
Methapyrilene	ND		48	1.2	ug/L		03/11/16 14:43	03/24/16 19:36	1
3-Methylcholanthrene	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Methyl methanesulfonate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2-Methylnaphthalene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Methyl parathion	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2-Methylphenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
3 & 4 Methylphenol	ND		19	1.9	ug/L		03/11/16 14:43	03/24/16 19:36	1
Naphthalene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
1,4-Naphthoquinone	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
1-Naphthylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2-Naphthylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2-Nitroaniline	ND		9.5	1.0	ug/L		03/11/16 14:43	03/24/16 19:36	1
3-Nitroaniline	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
4-Nitroaniline	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Nitrobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
5-Nitro-o-toluidine	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1

Client Sample ID: PZ-212-SD

Date Collected: 03/07/16 08:42
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrophenol	ND		9.5	1.4	ug/L		03/11/16 14:43	03/24/16 19:36	1
4-Nitrophenol	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 19:36	1
N-Nitrosodiethylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
N-Nitrosodimethylamine	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 19:36	1
N-Nitrosodi-n-butylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
N-Nitrosodi-n-propylamine	ND		9.5	1.4	ug/L		03/11/16 14:43	03/24/16 19:36	1
N-Nitrosomethylethylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
N-Nitrosomorpholine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
N-Nitrosopiperidine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
N-Nitrosopyrrolidine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
o,o',o''-Triethylphosphorothioate	ND		48	1.1	ug/L		03/11/16 14:43	03/24/16 19:36	1
o-Toluidine	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Parathion	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
p-Dimethylamino azobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Pentachlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Pentachloronitrobenzene	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Pentachlorophenol	ND		48	1.2	ug/L		03/11/16 14:43	03/24/16 19:36	1
Phenacetin	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Phenanthrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Phenol	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 19:36	1
Phorate	ND		48	1.9	ug/L		03/11/16 14:43	03/24/16 19:36	1
p-Phenylene diamine	ND		95	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Pronamide	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Pyrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Safrole	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
1,2,4,5-Tetrachlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2,3,4,6-Tetrachlorophenol	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
Thionazin	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
1,2,4-Trichlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2,4,5-Trichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
2,4,6-Trichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1
1,3,5-Trinitrobenzene	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 19:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*67*		*43 - 108*	*03/11/16 14:43*	*03/24/16 19:36*	*1*
2-Fluorophenol (Surr)	*24*		*15 - 59*	*03/11/16 14:43*	*03/24/16 19:36*	*1*
Nitrobenzene-d5 (Surr)	*75*		*50 - 101*	*03/11/16 14:43*	*03/24/16 19:36*	*1*
Phenol-d5 (Surr)	*14*		*10 - 50*	*03/11/16 14:43*	*03/24/16 19:36*	*1*
Terphenyl-d14 (Surr)	*62*		*21 - 97*	*03/11/16 14:43*	*03/24/16 19:36*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*37 - 120*	*03/11/16 14:43*	*03/24/16 19:36*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kepone	ND		95	19	ug/L		03/11/16 14:43	04/05/16 20:26	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.25**		0.10	0.010	mg/L			03/26/16 05:59	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: PZ-212-SD

Date Collected: 03/07/16 08:42
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	97		10	1.0	mg/L			03/26/16 06:14	20

Method: 300.0 - Anions, Ion Chromatography - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	160		20	2.0	mg/L			03/26/16 06:29	100

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		50	19	ug/L		03/14/16 13:50	04/02/16 02:09	5
Arsenic	ND		50	8.9	ug/L		03/14/16 13:50	04/06/16 18:57	5
Barium	200	J	250	11	ug/L		03/14/16 13:50	04/02/16 02:09	5
Beryllium	ND		25	1.4	ug/L		03/14/16 13:50	04/02/16 02:09	5
Boron	ND	^	250	36	ug/L		03/14/16 13:50	04/02/16 02:09	5
Cadmium	ND		25	1.7	ug/L		03/14/16 13:50	04/02/16 02:09	5
CaHard	300000	B	5000	270	ug/L		03/14/16 13:50	04/02/16 02:09	5
Calcium	120000		5000	270	ug/L		03/14/16 13:50	04/02/16 02:09	5
Chromium	ND		50	17	ug/L		03/14/16 13:50	04/06/16 18:57	5
Cobalt	ND		250	14	ug/L		03/14/16 13:50	04/02/16 02:09	5
Copper	ND		130	11	ug/L		03/14/16 13:50	04/02/16 02:09	5
Iron	240	J B	500	64	ug/L		03/14/16 13:50	04/02/16 02:09	5
Lead	ND		50	3.0	ug/L		03/14/16 13:50	04/02/16 02:09	5
Magnesium	52		5.0	0.25	mg/L		03/14/16 13:50	04/02/16 02:09	5
Manganese	620		75	5.0	ug/L		03/14/16 13:50	04/02/16 02:09	5
MgHard	210000	B	5000	250	ug/L		03/14/16 13:50	04/02/16 02:09	5
Nickel	ND		0.20	0.013	mg/L		03/14/16 13:50	04/02/16 02:09	5
Phosphorus	220	J ^ B	1300	69	ug/L		03/14/16 13:50	04/02/16 02:09	5
Selenium	ND		75	10	ug/L		03/14/16 13:50	04/02/16 02:09	5
Silver	ND		100	5.0	ug/L		03/14/16 13:50	04/02/16 02:09	5
Sodium	85000		5000	530	ug/L		03/14/16 13:50	04/02/16 02:09	5
Thallium	23	J	100	12	ug/L		03/14/16 13:50	04/02/16 02:09	5
Total Hardness	510000		25000	8700	ug/L		03/14/16 13:50	04/02/16 02:09	5
Vanadium	ND		250	22	ug/L		03/14/16 13:50	04/02/16 02:09	5
Zinc	ND		100	42	ug/L		03/14/16 13:50	04/02/16 02:09	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 20:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	730		5.0	3.5	mg/L			03/10/16 09:11	1
Ammonia	0.088	J F1 F2	0.10	0.022	mg/L			04/01/16 21:45	1
Nitrate Nitrite as N	ND		0.10	0.019	mg/L			04/01/16 11:57	1
Chemical Oxygen Demand	ND		20	6.5	mg/L		03/16/16 14:28	03/17/16 11:27	1
Total Organic Carbon	1.2		1.0	0.72	mg/L			03/23/16 23:34	1

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.273		0.177	0.178	1.00	0.235	pCi/L	03/10/16 16:34	04/03/16 17:15	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110	03/10/16 16:34	04/03/16 17:15	1

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.307**		0.0749	0.0798	1.00	0.0609	pCi/L	03/11/16 19:36	04/01/16 07:07	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110	03/11/16 19:36	04/01/16 07:07	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.427	U	0.466	0.468	1.00	0.763	pCi/L	03/11/16 20:03	04/01/16 16:33	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110	03/11/16 20:03	04/01/16 16:33	1
Y Carrier	80.4		40 - 110	03/11/16 20:03	04/01/16 16:33	1

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0323	U	0.179	0.179	1.00	0.318	pCi/L	03/10/16 13:33	03/15/16 11:56	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110	03/10/16 13:33	03/15/16 11:56	1
Y Carrier	88.6		40 - 110	03/10/16 13:33	03/15/16 11:56	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	9.91	U	202	202	500	376	pCi/L	03/29/16 12:57	03/30/16 17:00	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.0486	U	0.140	0.140	1.00	0.250	pCi/L	03/22/16 13:44	03/29/16 11:07	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Thorium-229	85.5		30 - 110	03/22/16 13:44	03/29/16 11:07	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**6.32**		0.500	0.729	1.00	0.0728	pCi/L	03/22/16 13:44	03/29/16 11:11	1
Uranium-235/236	0.0655	U	0.0681	0.0683	1.00	0.0989	pCi/L	03/22/16 13:44	03/29/16 11:11	1
Uranium-238	**3.87**		0.390	0.508	1.00	0.0295	pCi/L	03/22/16 13:44	03/29/16 11:11	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	93.0		30 - 110	03/22/16 13:44	03/29/16 11:11	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: PZ-212-SS

Date Collected: 03/07/16 10:05
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/11/16 00:38	1
Acetonitrile	ND		50	7.3	ug/L			03/11/16 00:38	1
Acrolein	ND		50	3.1	ug/L			03/11/16 00:38	1
Acrylonitrile	ND		50	1.7	ug/L			03/11/16 00:38	1
Allyl chloride	ND		10	0.39	ug/L			03/11/16 00:38	1
Benzene	ND		5.0	0.25	ug/L			03/11/16 00:38	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/11/16 00:38	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/11/16 00:38	1
Bromoform	ND		5.0	0.37	ug/L			03/11/16 00:38	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/11/16 00:38	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/11/16 00:38	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/11/16 00:38	1
Chloroethane	ND		10	0.38	ug/L			03/11/16 00:38	1
Chloroform	ND		5.0	0.15	ug/L			03/11/16 00:38	1
Chloroprene	ND		5.0	0.39	ug/L			03/11/16 00:38	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/11/16 00:38	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/11/16 00:38	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/11/16 00:38	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/11/16 00:38	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/11/16 00:38	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/11/16 00:38	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/11/16 00:38	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/11/16 00:38	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/11/16 00:38	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/11/16 00:38	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/11/16 00:38	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/11/16 00:38	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/11/16 00:38	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/11/16 00:38	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/11/16 00:38	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/11/16 00:38	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/11/16 00:38	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/11/16 00:38	1
2-Hexanone	ND		20	0.59	ug/L			03/11/16 00:38	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/11/16 00:38	1
Methacrylonitrile	ND		50	2.1	ug/L			03/11/16 00:38	1
Methyl bromide	ND		10	0.40	ug/L			03/11/16 00:38	1
Methyl chloride	ND		10	0.55	ug/L			03/11/16 00:38	1
Methylene bromide	ND		5.0	0.41	ug/L			03/11/16 00:38	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/11/16 00:38	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/11/16 00:38	1
Methyl iodide	ND		5.0	1.5	ug/L			03/11/16 00:38	1
Methyl methacrylate	ND		10	0.51	ug/L			03/11/16 00:38	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/11/16 00:38	1
Propionitrile	ND		50	2.4	ug/L			03/11/16 00:38	1
Styrene	ND		5.0	0.35	ug/L			03/11/16 00:38	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/11/16 00:38	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/11/16 00:38	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/11/16 00:38	1

Client Sample ID: PZ-212-SS

Date Collected: 03/07/16 10:05
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		5.0	1.0	ug/L			03/11/16 00:38	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/11/16 00:38	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/11/16 00:38	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/11/16 00:38	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/11/16 00:38	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/11/16 00:38	1
Trichloroethene	ND		5.0	0.29	ug/L			03/11/16 00:38	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/11/16 00:38	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/11/16 00:38	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/11/16 00:38	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/11/16 00:38	1
Xylenes, Total	ND		10	0.85	ug/L			03/11/16 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*71 - 139*		*03/11/16 00:38*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 121*		*03/11/16 00:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*76 - 121*		*03/11/16 00:38*	*1*
Toluene-d8 (Surr)	*99*		*80 - 129*		*03/11/16 00:38*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Acenaphthylene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Acetophenone	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2-Acetylaminofluorene	ND		95	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
4-Aminobiphenyl	ND		48	1.0	ug/L		03/11/16 14:43	03/24/16 20:09	1
Anthracene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Benzo[a]anthracene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Benzo[a]pyrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Benzo[b]fluoranthene	ND	*	9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Benzo[g,h,i]perylene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Benzo[k]fluoranthene	ND	*	9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Benzyl alcohol	ND		9.5	2.9	ug/L		03/11/16 14:43	03/24/16 20:09	1
Bis(2-chloroethoxy)methane	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Bis(2-chloroethyl)ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
bis(2 chloro-1-methylethyl) ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Bis(2-ethylhexyl) phthalate	ND		9.5	1.8	ug/L		03/11/16 14:43	03/24/16 20:09	1
4-Bromophenyl phenyl ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Butyl benzyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
4-Chloroaniline	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 20:09	1
Chlorobenzilate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
4-Chloro-3-methylphenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2-Chloronaphthalene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2-Chlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
4-Chlorophenyl phenyl ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Chrysene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Diallate	ND		19	1.9	ug/L		03/11/16 14:43	03/24/16 20:09	1
Dibenz(a,h)anthracene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Dibenzofuran	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
3,3'-Dichlorobenzidine	ND		48	1.2	ug/L		03/11/16 14:43	03/24/16 20:09	1

Client Sample ID: PZ-212-SS

Date Collected: 03/07/16 10:05
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-2

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2,6-Dichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Diethyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Dimethoate	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
3,3'-Dimethylbenzidine	ND		48	2.5	ug/L		03/11/16 14:43	03/24/16 20:09	1
2,4-Dimethylphenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Dimethyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Di-n-butyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
1,3-Dinitrobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
1,4-Dinitrobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
4,6-Dinitro-2-methylphenol	ND		9.5	1.2	ug/L		03/11/16 14:43	03/24/16 20:09	1
2,4-Dinitrophenol	ND	*	48	1.9	ug/L		03/11/16 14:43	03/24/16 20:09	1
2,4-Dinitrotoluene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2,6-Dinitrotoluene	ND		9.5	2.1	ug/L		03/11/16 14:43	03/24/16 20:09	1
Di-n-octyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Dinoseb	ND		19	1.9	ug/L		03/11/16 14:43	03/24/16 20:09	1
Diphenylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Disulfoton	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Ethyl methanesulfonate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Famphur	ND		95	1.6	ug/L		03/11/16 14:43	03/24/16 20:09	1
Fluoranthene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Fluorene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Hexachlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Hexachlorobutadiene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Hexachlorocyclopentadiene	ND	*	9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Hexachloroethane	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Hexachlorophene	ND		240	9.5	ug/L		03/11/16 14:43	03/24/16 20:09	1
Hexachloropropene	ND		95	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Indeno[1,2,3-cd]pyrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Isodrin	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Isophorone	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Isosafrole	ND		19	4.8	ug/L		03/11/16 14:43	03/24/16 20:09	1
Methapyrilene	ND		48	1.2	ug/L		03/11/16 14:43	03/24/16 20:09	1
3-Methylcholanthrene	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Methyl methanesulfonate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2-Methylnaphthalene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Methyl parathion	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2-Methylphenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
3 & 4 Methylphenol	ND		19	1.9	ug/L		03/11/16 14:43	03/24/16 20:09	1
Naphthalene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
1,4-Naphthoquinone	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
1-Naphthylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2-Naphthylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2-Nitroaniline	ND		9.5	1.0	ug/L		03/11/16 14:43	03/24/16 20:09	1
3-Nitroaniline	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
4-Nitroaniline	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Nitrobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
5-Nitro-o-toluidine	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: PZ-212-SS

Date Collected: 03/07/16 10:05
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-2

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrophenol	ND		9.5	1.4	ug/L		03/11/16 14:43	03/24/16 20:09	1
4-Nitrophenol	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 20:09	1
N-Nitrosodiethylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
N-Nitrosodimethylamine	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 20:09	1
N-Nitrosodi-n-butylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
N-Nitrosodi-n-propylamine	ND		9.5	1.4	ug/L		03/11/16 14:43	03/24/16 20:09	1
N-Nitrosomethylethylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
N-Nitrosomorpholine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
N-Nitrosopiperidine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
N-Nitrosopyrrolidine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
o,o',o''-Triethylphosphorothioate	ND		48	1.1	ug/L		03/11/16 14:43	03/24/16 20:09	1
o-Toluidine	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Parathion	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
p-Dimethylamino azobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Pentachlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Pentachloronitrobenzene	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Pentachlorophenol	ND		48	1.2	ug/L		03/11/16 14:43	03/24/16 20:09	1
Phenacetin	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Phenanthrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Phenol	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 20:09	1
Phorate	ND		48	1.9	ug/L		03/11/16 14:43	03/24/16 20:09	1
p-Phenylene diamine	ND		95	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Pronamide	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Pyrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Safrole	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
1,2,4,5-Tetrachlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2,3,4,6-Tetrachlorophenol	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
Thionazin	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
1,2,4-Trichlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2,4,5-Trichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
2,4,6-Trichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1
1,3,5-Trinitrobenzene	ND		48	0.95	ug/L		03/11/16 14:43	03/24/16 20:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*63*		*43 - 108*	*03/11/16 14:43*	*03/24/16 20:09*	*1*
2-Fluorophenol (Surr)	*22*		*15 - 59*	*03/11/16 14:43*	*03/24/16 20:09*	*1*
Nitrobenzene-d5 (Surr)	*64*		*50 - 101*	*03/11/16 14:43*	*03/24/16 20:09*	*1*
Phenol-d5 (Surr)	*12*		*10 - 50*	*03/11/16 14:43*	*03/24/16 20:09*	*1*
Terphenyl-d14 (Surr)	*43*		*21 - 97*	*03/11/16 14:43*	*03/24/16 20:09*	*1*
2,4,6-Tribromophenol (Surr)	*73*		*37 - 120*	*03/11/16 14:43*	*03/24/16 20:09*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kepone	ND		95	19	ug/L		03/11/16 14:43	04/05/16 20:58	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.49**		0.10	0.010	mg/L			03/26/16 07:13	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: PZ-212-SS

Date Collected: 03/07/16 10:05
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-2

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**120**		10	1.0	mg/L			03/26/16 07:28	20
Chloride	**8.9**		4.0	0.40	mg/L			03/26/16 07:28	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		250	94	ug/L		03/14/16 13:50	04/02/16 02:13	5
Arsenic	ND		250	45	ug/L		03/14/16 13:50	04/06/16 19:01	5
Barium	**530**	**J**	1300	53	ug/L		03/14/16 13:50	04/02/16 02:13	5
Beryllium	ND		130	7.1	ug/L		03/14/16 13:50	04/02/16 02:13	5
Boron	ND	^	1300	180	ug/L		03/14/16 13:50	04/02/16 02:13	5
Cadmium	ND		130	8.4	ug/L		03/14/16 13:50	04/02/16 02:13	5
CaHard	**1500000**	**B**	25000	1400	ug/L		03/14/16 13:50	04/02/16 02:13	5
Calcium	**590000**		25000	1400	ug/L		03/14/16 13:50	04/02/16 02:13	5
Chromium	ND		250	84	ug/L		03/14/16 13:50	04/06/16 19:01	5
Cobalt	ND		1300	68	ug/L		03/14/16 13:50	04/02/16 02:13	5
Copper	ND		630	53	ug/L		03/14/16 13:50	04/02/16 02:13	5
Iron	**22000**	**B**	2500	320	ug/L		03/14/16 13:50	04/02/16 02:13	5
Lead	ND		250	15	ug/L		03/14/16 13:50	04/02/16 02:13	5
Magnesium	**140**		25	1.3	mg/L		03/14/16 13:50	04/02/16 02:13	5
Manganese	**1800**		380	25	ug/L		03/14/16 13:50	04/02/16 02:13	5
MgHard	**570000**	**B**	25000	1300	ug/L		03/14/16 13:50	04/02/16 02:13	5
Nickel	ND		1.0	0.064	mg/L		03/14/16 13:50	04/02/16 02:13	5
Phosphorus	**610**	**J ^ B**	6300	350	ug/L		03/14/16 13:50	04/02/16 02:13	5
Selenium	ND		380	52	ug/L		03/14/16 13:50	04/02/16 02:13	5
Silver	ND		500	25	ug/L		03/14/16 13:50	04/02/16 02:13	5
Sodium	**210000**		25000	2600	ug/L		03/14/16 13:50	04/02/16 02:13	5
Thallium	**98**	**J**	500	60	ug/L		03/14/16 13:50	04/02/16 02:13	5
Total Hardness	**2100000**		130000	44000	ug/L		03/14/16 13:50	04/02/16 02:13	5
Vanadium	**120**	**J**	1300	110	ug/L		03/14/16 13:50	04/02/16 02:13	5
Zinc	**260**	**J**	500	210	ug/L		03/14/16 13:50	04/02/16 02:13	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 20:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	**550**		5.0	3.5	mg/L			03/10/16 09:11	1
Ammonia	ND		0.10	0.022	mg/L			04/01/16 21:51	1
Nitrate Nitrite as N	ND		0.10	0.019	mg/L			04/01/16 12:03	1
Chemical Oxygen Demand	ND		20	6.5	mg/L		03/16/16 14:28	03/17/16 11:27	1
Total Organic Carbon	**0.96**	**J**	1.0	0.72	mg/L			03/23/16 23:45	1

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.545**		0.211	0.217	1.00	0.218	pCi/L	03/10/16 16:34	04/03/16 17:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.3*		*40 - 110*	*03/10/16 16:34*	*04/03/16 17:15*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.116**		0.0603	0.0612	1.00	0.0827	pCi/L	03/11/16 19:36	04/01/16 07:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.4*		*40 - 110*	*03/11/16 19:36*	*04/01/16 07:07*	*1*

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0243	U G	0.571	0.571	1.00	1.01	pCi/L	03/11/16 20:03	04/01/16 16:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.3*		*40 - 110*	*03/11/16 20:03*	*04/01/16 16:33*	*1*
Y Carrier	*81.5*		*40 - 110*	*03/11/16 20:03*	*04/01/16 16:33*	*1*

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0383	U	0.206	0.206	1.00	0.365	pCi/L	03/10/16 13:33	03/15/16 11:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.4*		*40 - 110*	*03/10/16 13:33*	*03/15/16 11:56*	*1*
Y Carrier	*83.7*		*40 - 110*	*03/10/16 13:33*	*03/15/16 11:56*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	105	U	213	213	500	369	pCi/L	03/29/16 12:57	03/30/16 17:23	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	**0.193**		0.0879	0.0894	1.00	0.0624	pCi/L	03/22/16 13:44	03/29/16 11:07	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Thorium-229	*91.1*		*30 - 110*	*03/22/16 13:44*	*03/29/16 11:07*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**3.13**		0.354	0.441	1.00	0.125	pCi/L	03/22/16 13:44	03/29/16 11:11	1
Uranium-235/236	0.0758	U	0.0825	0.0827	1.00	0.128	pCi/L	03/22/16 13:44	03/29/16 11:11	1
Uranium-238	**1.84**		0.268	0.310	1.00	0.0639	pCi/L	03/22/16 13:44	03/29/16 11:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*91.3*		*30 - 110*	*03/22/16 13:44*	*03/29/16 11:11*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: MW-1204

Date Collected: 03/07/16 12:55
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**8100**		1000	330	ug/L			03/11/16 01:04	50
Acetonitrile	ND		2500	360	ug/L			03/11/16 01:04	50
Acrolein	ND		2500	160	ug/L			03/11/16 01:04	50
Acrylonitrile	ND		2500	83	ug/L			03/11/16 01:04	50
Allyl chloride	ND		500	20	ug/L			03/11/16 01:04	50
Benzene	ND		250	13	ug/L			03/11/16 01:04	50
Bromochloromethane	ND		250	28	ug/L			03/11/16 01:04	50
Bromodichloromethane	ND		250	13	ug/L			03/11/16 01:04	50
Bromoform	ND		250	19	ug/L			03/11/16 01:04	50
Carbon disulfide	ND		250	19	ug/L			03/11/16 01:04	50
Carbon tetrachloride	ND		250	18	ug/L			03/11/16 01:04	50
Chlorobenzene	ND		250	19	ug/L			03/11/16 01:04	50
Chloroethane	ND		500	19	ug/L			03/11/16 01:04	50
Chloroform	ND		250	7.5	ug/L			03/11/16 01:04	50
Chloroprene	ND		250	20	ug/L			03/11/16 01:04	50
cis-1,2-Dichloroethene	ND		250	8.0	ug/L			03/11/16 01:04	50
cis-1,3-Dichloropropene	ND		250	17	ug/L			03/11/16 01:04	50
Dibromochloromethane	ND		250	17	ug/L			03/11/16 01:04	50
1,2-Dibromo-3-Chloropropane	ND		500	58	ug/L			03/11/16 01:04	50
1,2-Dibromoethane (EDB)	ND		250	22	ug/L			03/11/16 01:04	50
1,2-Dichlorobenzene	ND		250	14	ug/L			03/11/16 01:04	50
1,3-Dichlorobenzene	ND		250	12	ug/L			03/11/16 01:04	50
1,4-Dichlorobenzene	ND		250	18	ug/L			03/11/16 01:04	50
Dichlorodifluoromethane	ND		500	23	ug/L			03/11/16 01:04	50
1,1-Dichloroethane	ND		250	20	ug/L			03/11/16 01:04	50
1,2-Dichloroethane	ND		250	19	ug/L			03/11/16 01:04	50
1,1-Dichloroethene	ND		250	19	ug/L			03/11/16 01:04	50
1,2-Dichloropropane	ND		250	16	ug/L			03/11/16 01:04	50
1,3-Dichloropropane	ND		250	12	ug/L			03/11/16 01:04	50
2,2-Dichloropropane	ND		250	27	ug/L			03/11/16 01:04	50
1,1-Dichloropropene	ND		250	15	ug/L			03/11/16 01:04	50
Ethylbenzene	ND		250	15	ug/L			03/11/16 01:04	50
Ethyl methacrylate	ND		250	13	ug/L			03/11/16 01:04	50
2-Hexanone	ND		1000	30	ug/L			03/11/16 01:04	50
Isobutyl alcohol	ND		10000	370	ug/L			03/11/16 01:04	50
Methacrylonitrile	ND		2500	110	ug/L			03/11/16 01:04	50
Methyl bromide	ND		500	20	ug/L			03/11/16 01:04	50
Methyl chloride	ND		500	28	ug/L			03/11/16 01:04	50
Methylene bromide	ND		250	21	ug/L			03/11/16 01:04	50
Methylene Chloride	ND		250	84	ug/L			03/11/16 01:04	50
Methyl Ethyl Ketone	**4600**		1000	20	ug/L			03/11/16 01:04	50
Methyl iodide	ND		250	76	ug/L			03/11/16 01:04	50
Methyl methacrylate	ND		500	26	ug/L			03/11/16 01:04	50
4-Methyl-2-pentanone (MIBK)	ND		1000	17	ug/L			03/11/16 01:04	50
Propionitrile	ND		2500	120	ug/L			03/11/16 01:04	50
Styrene	ND		250	18	ug/L			03/11/16 01:04	50
1,1,1,2-Tetrachloroethane	ND		250	13	ug/L			03/11/16 01:04	50
1,1,2,2-Tetrachloroethane	ND		250	22	ug/L			03/11/16 01:04	50
Tetrachloroethene	ND		250	14	ug/L			03/11/16 01:04	50

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: MW-1204

Date Collected: 03/07/16 12:55
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-3

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	**93**	**J**	250	50	ug/L			03/11/16 01:04	50
trans-1,4-Dichloro-2-butene	ND		500	48	ug/L			03/11/16 01:04	50
trans-1,2-Dichloroethene	ND		250	9.0	ug/L			03/11/16 01:04	50
trans-1,3-Dichloropropene	ND		250	18	ug/L			03/11/16 01:04	50
1,1,1-Trichloroethane	ND		250	15	ug/L			03/11/16 01:04	50
1,1,2-Trichloroethane	ND		250	29	ug/L			03/11/16 01:04	50
Trichloroethene	ND		250	15	ug/L			03/11/16 01:04	50
Trichlorofluoromethane	ND		250	11	ug/L			03/11/16 01:04	50
1,2,3-Trichloropropane	ND		250	28	ug/L			03/11/16 01:04	50
Vinyl acetate	ND		250	31	ug/L			03/11/16 01:04	50
Vinyl chloride	ND		250	22	ug/L			03/11/16 01:04	50
Xylenes, Total	ND		500	43	ug/L			03/11/16 01:04	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*71 - 139*		*03/11/16 01:04*	*50*
Dibromofluoromethane (Surr)	*102*		*80 - 121*		*03/11/16 01:04*	*50*
1,2-Dichloroethane-d4 (Surr)	*108*		*76 - 121*		*03/11/16 01:04*	*50*
Toluene-d8 (Surr)	*94*		*80 - 129*		*03/11/16 01:04*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Acenaphthylene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Acetophenone	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2-Acetylaminofluorene	ND		200	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
4-Aminobiphenyl	ND		100	2.1	ug/L		03/11/16 14:43	03/24/16 20:42	1
Anthracene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Benzo[a]anthracene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Benzo[a]pyrene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Benzo[b]fluoranthene	ND	*	20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Benzo[g,h,i]perylene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Benzo[k]fluoranthene	ND	*	20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Benzyl alcohol	ND		20	6.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Bis(2-chloroethoxy)methane	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Bis(2-chloroethyl)ether	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
bis(2 chloro-1-methylethyl) ether	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Bis(2-ethylhexyl) phthalate	ND		20	3.7	ug/L		03/11/16 14:43	03/24/16 20:42	1
4-Bromophenyl phenyl ether	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Butyl benzyl phthalate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
4-Chloroaniline	ND		20	4.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Chlorobenzilate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
4-Chloro-3-methylphenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2-Chloronaphthalene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2-Chlorophenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
4-Chlorophenyl phenyl ether	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Chrysene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Diallate	ND		40	4.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Dibenz(a,h)anthracene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Dibenzofuran	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
3,3'-Dichlorobenzidine	ND		100	2.6	ug/L		03/11/16 14:43	03/24/16 20:42	1

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: MW-1204

Date Collected: 03/07/16 12:55
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2,6-Dichlorophenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Diethyl phthalate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Dimethoate	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
7,12-Dimethylbenz(a)anthracene	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
3,3'-Dimethylbenzidine	ND		100	5.2	ug/L		03/11/16 14:43	03/24/16 20:42	1
2,4-Dimethylphenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Dimethyl phthalate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Di-n-butyl phthalate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
1,3-Dinitrobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
1,4-Dinitrobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
4,6-Dinitro-2-methylphenol	ND		20	2.5	ug/L		03/11/16 14:43	03/24/16 20:42	1
2,4-Dinitrophenol	ND	*	100	4.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2,4-Dinitrotoluene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2,6-Dinitrotoluene	ND		20	4.3	ug/L		03/11/16 14:43	03/24/16 20:42	1
Di-n-octyl phthalate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Dinoseb	ND		40	4.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Diphenylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Disulfoton	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Ethyl methanesulfonate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Famphur	ND		200	3.4	ug/L		03/11/16 14:43	03/24/16 20:42	1
Fluoranthene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Fluorene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Hexachlorobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Hexachlorobutadiene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Hexachlorocyclopentadiene	ND	*	20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Hexachloroethane	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Hexachlorophene	ND		500	20	ug/L		03/11/16 14:43	03/24/16 20:42	1
Hexachloropropene	ND		200	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Indeno[1,2,3-cd]pyrene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Isodrin	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Isophorone	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Isosafrole	ND		40	10	ug/L		03/11/16 14:43	03/24/16 20:42	1
Methapyrilene	ND		100	2.5	ug/L		03/11/16 14:43	03/24/16 20:42	1
3-Methylcholanthrene	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Methyl methanesulfonate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2-Methylnaphthalene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Methyl parathion	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2-Methylphenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Naphthalene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
1,4-Naphthoquinone	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
1-Naphthylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2-Naphthylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2-Nitroaniline	ND		20	2.2	ug/L		03/11/16 14:43	03/24/16 20:42	1
3-Nitroaniline	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
4-Nitroaniline	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Nitrobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
5-Nitro-o-toluidine	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2-Nitrophenol	ND		20	3.0	ug/L		03/11/16 14:43	03/24/16 20:42	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: MW-1204

Date Collected: 03/07/16 12:55
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-3

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	ND		20	4.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
N-Nitrosodiethylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
N-Nitrosodimethylamine	ND		20	4.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
N-Nitrosodi-n-butylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
N-Nitrosodi-n-propylamine	ND		20	3.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
N-Nitrosomethylethylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
N-Nitrosomorpholine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
N-Nitrosopiperidine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
N-Nitrosopyrrolidine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
o,o',o''-Triethylphosphorothioate	ND		100	2.3	ug/L		03/11/16 14:43	03/24/16 20:42	1
o-Toluidine	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Parathion	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
p-Dimethylamino azobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Pentachlorobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Pentachloronitrobenzene	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Pentachlorophenol	ND		100	2.5	ug/L		03/11/16 14:43	03/24/16 20:42	1
Phenacetin	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Phenanthrene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Phorate	ND		100	4.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
p-Phenylene diamine	ND		200	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Pronamide	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Pyrene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Safrole	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
1,2,4,5-Tetrachlorobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2,3,4,6-Tetrachlorophenol	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
Thionazin	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
1,2,4-Trichlorobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2,4,5-Trichlorophenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
2,4,6-Trichlorophenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1
1,3,5-Trinitrobenzene	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 20:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*50*		*43 - 108*	*03/11/16 14:43*	*03/24/16 20:42*	*1*
2-Fluorophenol (Surr)	*29*		*15 - 59*	*03/11/16 14:43*	*03/24/16 20:42*	*1*
Nitrobenzene-d5 (Surr)	*50*		*50 - 101*	*03/11/16 14:43*	*03/24/16 20:42*	*1*
Phenol-d5 (Surr)	*0*	*X*	*10 - 50*	*03/11/16 14:43*	*03/24/16 20:42*	*1*
Terphenyl-d14 (Surr)	*23*		*21 - 97*	*03/11/16 14:43*	*03/24/16 20:42*	*1*
2,4,6-Tribromophenol (Surr)	*55*		*37 - 120*	*03/11/16 14:43*	*03/24/16 20:42*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	**2500**		400	40	ug/L		03/11/16 14:43	04/05/16 18:36	10
Phenol	**1200**		200	40	ug/L		03/11/16 14:43	04/05/16 18:36	10

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kepone	ND		200	40	ug/L		03/11/16 14:43	04/06/16 00:44	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: MW-1204

Date Collected: 03/07/16 12:55
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-3

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	2.0		1.0	0.10	mg/L			03/26/16 07:58	10
Sulfate	59		5.0	0.50	mg/L			03/26/16 07:58	10

Method: 300.0 - Anions, Ion Chromatography - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		400	40	mg/L			03/26/16 08:28	2000

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		50	19	ug/L		03/14/16 13:50	04/02/16 02:18	5
Arsenic	15	J	50	8.9	ug/L		03/14/16 13:50	04/06/16 19:06	5
Barium	1500		250	11	ug/L		03/14/16 13:50	04/02/16 02:18	5
Beryllium	ND		25	1.4	ug/L		03/14/16 13:50	04/02/16 02:18	5
Boron	1200	^	250	36	ug/L		03/14/16 13:50	04/02/16 02:18	5
Cadmium	ND		25	1.7	ug/L		03/14/16 13:50	04/02/16 02:18	5
CaHard	640000	B	5000	270	ug/L		03/14/16 13:50	04/02/16 02:18	5
Calcium	260000		5000	270	ug/L		03/14/16 13:50	04/02/16 02:18	5
Chromium	27	J	50	17	ug/L		03/14/16 13:50	04/06/16 19:06	5
Cobalt	ND		250	14	ug/L		03/14/16 13:50	04/02/16 02:18	5
Copper	ND		130	11	ug/L		03/14/16 13:50	04/02/16 02:18	5
Iron	13000	B	500	64	ug/L		03/14/16 13:50	04/02/16 02:18	5
Lead	ND		50	3.0	ug/L		03/14/16 13:50	04/02/16 02:18	5
Magnesium	57		5.0	0.25	mg/L		03/14/16 13:50	04/02/16 02:18	5
Manganese	640		75	5.0	ug/L		03/14/16 13:50	04/02/16 02:18	5
MgHard	240000	B	5000	250	ug/L		03/14/16 13:50	04/02/16 02:18	5
Nickel	ND		0.20	0.013	mg/L		03/14/16 13:50	04/02/16 02:18	5
Phosphorus	110	J ^ B	1300	69	ug/L		03/14/16 13:50	04/02/16 02:18	5
Selenium	ND		75	10	ug/L		03/14/16 13:50	04/02/16 02:18	5
Silver	ND		100	5.0	ug/L		03/14/16 13:50	04/02/16 02:18	5
Sodium	190000		5000	530	ug/L		03/14/16 13:50	04/02/16 02:18	5
Thallium	12	J	100	12	ug/L		03/14/16 13:50	04/02/16 02:18	5
Total Hardness	880000		25000	8700	ug/L		03/14/16 13:50	04/02/16 02:18	5
Vanadium	24	J	250	22	ug/L		03/14/16 13:50	04/02/16 02:18	5
Zinc	ND		100	42	ug/L		03/14/16 13:50	04/02/16 02:18	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 20:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	150		10	2.2	mg/L			04/01/16 21:53	100
Nitrate Nitrite as N	ND		0.50	0.095	mg/L			04/01/16 12:05	5

General Chemistry - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	10000		50	35	mg/L			03/10/16 09:11	10
Chemical Oxygen Demand	9200		2000	650	mg/L		03/16/16 14:28	03/17/16 11:27	100
Total Organic Carbon	2500		200	140	mg/L			03/23/16 23:57	200

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: MW-1204

Date Collected: 03/07/16 12:55
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-3

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	43.9		2.56	4.71	1.00	0.578	pCi/L	03/10/16 16:34	04/03/16 17:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*66.4*		*40 - 110*	*03/10/16 16:34*	*04/03/16 17:15*	*1*

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	49.5		1.69	4.76	1.00	0.241	pCi/L	03/11/16 19:36	04/01/16 07:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.6*		*40 - 110*	*03/11/16 19:36*	*04/01/16 07:10*	*1*

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	8.41	G	1.85	2.01	1.00	2.06	pCi/L	03/11/16 20:03	04/01/16 16:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*66.4*		*40 - 110*	*03/11/16 20:03*	*04/01/16 16:33*	*1*
Y Carrier	*80.4*		*40 - 110*	*03/11/16 20:03*	*04/01/16 16:33*	*1*

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.61	G	1.26	1.36	1.00	1.45	pCi/L	03/10/16 13:33	03/15/16 11:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.6*		*40 - 110*	*03/10/16 13:33*	*03/15/16 11:56*	*1*
Y Carrier	*86.4*		*40 - 110*	*03/10/16 13:33*	*03/15/16 11:56*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	27700		1340	2780	500	381	pCi/L	03/29/16 12:57	03/30/16 17:46	1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	1.78		1.07	1.08	1.00	0.848	pCi/L	03/22/16 13:44	03/29/16 11:07	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Thorium-229	*58.3*		*30 - 110*	*03/22/16 13:44*	*03/29/16 11:07*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: MW-1204

Lab Sample ID: 160-16405-3
Date Collected: 03/07/16 12:55
Matrix: Water
Date Received: 03/07/16 16:45

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.108	U	0.454	0.454	1.00	0.962	pCi/L	03/22/16 13:44	03/29/16 11:11	1
Uranium-235/236	0.0721	U	0.268	0.268	1.00	0.683	pCi/L	03/22/16 13:44	03/29/16 11:11	1
Uranium-238	0.347	U	0.526	0.527	1.00	0.911	pCi/L	03/22/16 13:44	03/29/16 11:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.8*		*30 - 110*	*03/22/16 13:44*	*03/29/16 11:11*	*1*

Client Sample ID: PZ-203-SS

Lab Sample ID: 160-16405-4
Date Collected: 03/07/16 14:39
Matrix: Water
Date Received: 03/07/16 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/11/16 01:29	1
Acetonitrile	ND		50	7.3	ug/L			03/11/16 01:29	1
Acrolein	ND		50	3.1	ug/L			03/11/16 01:29	1
Acrylonitrile	ND		50	1.7	ug/L			03/11/16 01:29	1
Allyl chloride	ND		10	0.39	ug/L			03/11/16 01:29	1
Benzene	ND		5.0	0.25	ug/L			03/11/16 01:29	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/11/16 01:29	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/11/16 01:29	1
Bromoform	ND		5.0	0.37	ug/L			03/11/16 01:29	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/11/16 01:29	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/11/16 01:29	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/11/16 01:29	1
Chloroethane	ND		10	0.38	ug/L			03/11/16 01:29	1
Chloroform	ND		5.0	0.15	ug/L			03/11/16 01:29	1
Chloroprene	ND		5.0	0.39	ug/L			03/11/16 01:29	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/11/16 01:29	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/11/16 01:29	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/11/16 01:29	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/11/16 01:29	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/11/16 01:29	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/11/16 01:29	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/11/16 01:29	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/11/16 01:29	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/11/16 01:29	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/11/16 01:29	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/11/16 01:29	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/11/16 01:29	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/11/16 01:29	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/11/16 01:29	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/11/16 01:29	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/11/16 01:29	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/11/16 01:29	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/11/16 01:29	1
2-Hexanone	ND		20	0.59	ug/L			03/11/16 01:29	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/11/16 01:29	1

Client Sample ID: PZ-203-SS

Date Collected: 03/07/16 14:39
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-4

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methacrylonitrile	ND		50	2.1	ug/L			03/11/16 01:29	1
Methyl bromide	ND		10	0.40	ug/L			03/11/16 01:29	1
Methyl chloride	ND		10	0.55	ug/L			03/11/16 01:29	1
Methylene bromide	ND		5.0	0.41	ug/L			03/11/16 01:29	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/11/16 01:29	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/11/16 01:29	1
Methyl iodide	ND		5.0	1.5	ug/L			03/11/16 01:29	1
Methyl methacrylate	ND		10	0.51	ug/L			03/11/16 01:29	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/11/16 01:29	1
Propionitrile	ND		50	2.4	ug/L			03/11/16 01:29	1
Styrene	ND		5.0	0.35	ug/L			03/11/16 01:29	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/11/16 01:29	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/11/16 01:29	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/11/16 01:29	1
Toluene	ND		5.0	1.0	ug/L			03/11/16 01:29	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/11/16 01:29	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/11/16 01:29	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/11/16 01:29	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/11/16 01:29	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/11/16 01:29	1
Trichloroethene	ND		5.0	0.29	ug/L			03/11/16 01:29	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/11/16 01:29	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/11/16 01:29	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/11/16 01:29	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/11/16 01:29	1
Xylenes, Total	ND		10	0.85	ug/L			03/11/16 01:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*71 - 139*		*03/11/16 01:29*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 121*		*03/11/16 01:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*76 - 121*		*03/11/16 01:29*	*1*
Toluene-d8 (Surr)	*101*		*80 - 129*		*03/11/16 01:29*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Acenaphthylene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Acetophenone	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2-Acetylaminofluorene	ND		95	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
4-Aminobiphenyl	ND		47	1.0	ug/L		03/11/16 14:43	03/24/16 21:48	1
Anthracene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Benzo[a]anthracene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Benzo[a]pyrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Benzo[b]fluoranthene	ND	*	9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Benzo[g,h,i]perylene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Benzo[k]fluoranthene	ND	*	9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Benzyl alcohol	ND		9.5	2.8	ug/L		03/11/16 14:43	03/24/16 21:48	1
Bis(2-chloroethoxy)methane	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Bis(2-chloroethyl)ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
bis(2 chloro-1-methylethyl) ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1

Client Sample ID: PZ-203-SS

Date Collected: 03/07/16 14:39
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-4

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		9.5	1.8	ug/L		03/11/16 14:43	03/24/16 21:48	1
4-Bromophenyl phenyl ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Butyl benzyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
4-Chloroaniline	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 21:48	1
Chlorobenzilate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
4-Chloro-3-methylphenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2-Chloronaphthalene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2-Chlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
4-Chlorophenyl phenyl ether	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Chrysene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Diallate	ND		19	1.9	ug/L		03/11/16 14:43	03/24/16 21:48	1
Dibenz(a,h)anthracene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Dibenzofuran	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
3,3'-Dichlorobenzidine	ND		47	1.2	ug/L		03/11/16 14:43	03/24/16 21:48	1
2,4-Dichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2,6-Dichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Diethyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Dimethoate	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
7,12-Dimethylbenz(a)anthracene	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
3,3'-Dimethylbenzidine	ND		47	2.5	ug/L		03/11/16 14:43	03/24/16 21:48	1
2,4-Dimethylphenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Dimethyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Di-n-butyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
1,3-Dinitrobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
1,4-Dinitrobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
4,6-Dinitro-2-methylphenol	ND		9.5	1.2	ug/L		03/11/16 14:43	03/24/16 21:48	1
2,4-Dinitrophenol	ND	*	47	1.9	ug/L		03/11/16 14:43	03/24/16 21:48	1
2,4-Dinitrotoluene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2,6-Dinitrotoluene	ND		9.5	2.1	ug/L		03/11/16 14:43	03/24/16 21:48	1
Di-n-octyl phthalate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Dinoseb	ND		19	1.9	ug/L		03/11/16 14:43	03/24/16 21:48	1
Diphenylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Disulfoton	ND		47	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Ethyl methanesulfonate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Famphur	ND		95	1.6	ug/L		03/11/16 14:43	03/24/16 21:48	1
Fluoranthene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Fluorene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Hexachlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Hexachlorobutadiene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Hexachlorocyclopentadiene	ND	*	9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Hexachloroethane	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Hexachlorophene	ND		240	9.5	ug/L		03/11/16 14:43	03/24/16 21:48	1
Hexachloropropene	ND		95	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Indeno[1,2,3-cd]pyrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Isodrin	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Isophorone	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Isosafrole	ND		19	4.7	ug/L		03/11/16 14:43	03/24/16 21:48	1
Methapyrilene	ND		47	1.2	ug/L		03/11/16 14:43	03/24/16 21:48	1
3-Methylcholanthrene	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1

Client Sample ID: PZ-203-SS

Date Collected: 03/07/16 14:39
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-4

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl methanesulfonate	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2-Methylnaphthalene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Methyl parathion	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2-Methylphenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
3 & 4 Methylphenol	ND		19	1.9	ug/L		03/11/16 14:43	03/24/16 21:48	1
Naphthalene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
1,4-Naphthoquinone	ND		47	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
1-Naphthylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2-Naphthylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2-Nitroaniline	ND		9.5	1.0	ug/L		03/11/16 14:43	03/24/16 21:48	1
3-Nitroaniline	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
4-Nitroaniline	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Nitrobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
5-Nitro-o-toluidine	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2-Nitrophenol	ND		9.5	1.4	ug/L		03/11/16 14:43	03/24/16 21:48	1
4-Nitrophenol	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 21:48	1
N-Nitrosodiethylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
N-Nitrosodimethylamine	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 21:48	1
N-Nitrosodi-n-butylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
N-Nitrosodi-n-propylamine	ND		9.5	1.4	ug/L		03/11/16 14:43	03/24/16 21:48	1
N-Nitrosomethylethylamine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
N-Nitrosomorpholine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
N-Nitrosopiperidine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
N-Nitrosopyrrolidine	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
o,o',o''-Triethylphosphorothioate	ND		47	1.1	ug/L		03/11/16 14:43	03/24/16 21:48	1
o-Toluidine	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Parathion	ND		47	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
p-Dimethylamino azobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Pentachlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Pentachloronitrobenzene	ND		47	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Pentachlorophenol	ND		47	1.2	ug/L		03/11/16 14:43	03/24/16 21:48	1
Phenacetin	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Phenanthrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Phenol	ND		9.5	1.9	ug/L		03/11/16 14:43	03/24/16 21:48	1
Phorate	ND		47	1.9	ug/L		03/11/16 14:43	03/24/16 21:48	1
p-Phenylene diamine	ND		95	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Pronamide	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Pyrene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Safrole	ND		19	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
1,2,4,5-Tetrachlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2,3,4,6-Tetrachlorophenol	ND		47	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
Thionazin	ND		47	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
1,2,4-Trichlorobenzene	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2,4,5-Trichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
2,4,6-Trichlorophenol	ND		9.5	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1
1,3,5-Trinitrobenzene	ND		47	0.95	ug/L		03/11/16 14:43	03/24/16 21:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*64*		*43 - 108*	*03/11/16 14:43*	*03/24/16 21:48*	*1*
2-Fluorophenol (Surr)	*24*		*15 - 59*	*03/11/16 14:43*	*03/24/16 21:48*	*1*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: PZ-203-SS

Date Collected: 03/07/16 14:39
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-4

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*70*		*50 - 101*	*03/11/16 14:43*	*03/24/16 21:48*	*1*
Phenol-d5 (Surr)	*13*		*10 - 50*	*03/11/16 14:43*	*03/24/16 21:48*	*1*
Terphenyl-d14 (Surr)	*53*		*21 - 97*	*03/11/16 14:43*	*03/24/16 21:48*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*37 - 120*	*03/11/16 14:43*	*03/24/16 21:48*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kepone	ND		95	19	ug/L		03/11/16 14:43	04/05/16 21:30	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.49**		0.10	0.010	mg/L			03/26/16 08:58	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**50**		10	1.0	mg/L			03/26/16 09:13	20
Chloride	**10**		4.0	0.40	mg/L			03/26/16 09:13	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		50	19	ug/L		03/14/16 13:50	04/02/16 02:22	5
Arsenic	**77**		50	8.9	ug/L		03/14/16 13:50	04/06/16 19:10	5
Barium	**320**		250	11	ug/L		03/14/16 13:50	04/02/16 02:22	5
Beryllium	ND		25	1.4	ug/L		03/14/16 13:50	04/02/16 02:22	5
Boron	ND	^	250	36	ug/L		03/14/16 13:50	04/02/16 02:22	5
Cadmium	ND		25	1.7	ug/L		03/14/16 13:50	04/02/16 02:22	5
CaHard	**790000**	**B**	5000	270	ug/L		03/14/16 13:50	04/02/16 02:22	5
Calcium	**320000**		5000	270	ug/L		03/14/16 13:50	04/02/16 02:22	5
Chromium	ND		50	17	ug/L		03/14/16 13:50	04/06/16 19:10	5
Cobalt	**36**	**J**	250	14	ug/L		03/14/16 13:50	04/02/16 02:22	5
Copper	ND		130	11	ug/L		03/14/16 13:50	04/02/16 02:22	5
Iron	**51000**	**B**	500	64	ug/L		03/14/16 13:50	04/02/16 02:22	5
Lead	ND		50	3.0	ug/L		03/14/16 13:50	04/02/16 02:22	5
Magnesium	**92**		5.0	0.25	mg/L		03/14/16 13:50	04/02/16 02:22	5
Manganese	**3700**		75	5.0	ug/L		03/14/16 13:50	04/02/16 02:22	5
MgHard	**380000**	**B**	5000	250	ug/L		03/14/16 13:50	04/02/16 02:22	5
Nickel	**0.075**	**J**	0.20	0.013	mg/L		03/14/16 13:50	04/02/16 02:22	5
Phosphorus	**1700**	**B**	1300	69	ug/L		03/14/16 13:50	04/06/16 19:10	5
Selenium	ND		75	10	ug/L		03/14/16 13:50	04/02/16 02:22	5
Silver	ND		100	5.0	ug/L		03/14/16 13:50	04/02/16 02:22	5
Sodium	**86000**		5000	530	ug/L		03/14/16 13:50	04/02/16 02:22	5
Thallium	**12**	**J**	100	12	ug/L		03/14/16 13:50	04/02/16 02:22	5
Total Hardness	**1200000**		25000	8700	ug/L		03/14/16 13:50	04/02/16 02:22	5
Vanadium	**26**	**J**	250	22	ug/L		03/14/16 13:50	04/02/16 02:22	5
Zinc	ND		100	42	ug/L		03/14/16 13:50	04/02/16 02:22	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 20:10	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: PZ-203-SS

Date Collected: 03/07/16 14:39
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-4

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	470		5.0	3.5	mg/L			03/10/16 09:11	1
Ammonia	0.066	J	0.10	0.022	mg/L			04/01/16 21:55	1
Nitrate Nitrite as N	ND		0.10	0.019	mg/L			04/01/16 12:07	1
Chemical Oxygen Demand	10	J	20	6.5	mg/L		03/16/16 14:28	03/17/16 11:27	1
Total Organic Carbon	2.6		1.0	0.72	mg/L			03/24/16 00:12	1

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.947		0.182	0.201	1.00	0.159	pCi/L	03/10/16 16:34	04/03/16 17:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.7*		*40 - 110*	*03/10/16 16:34*	*04/03/16 17:15*	*1*

Method: 903.0 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.888		0.117	0.141	1.00	0.0660	pCi/L	03/11/16 19:36	04/01/16 07:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.4*		*40 - 110*	*03/11/16 19:36*	*04/01/16 07:10*	*1*

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.361		0.231	0.233	1.00	0.352	pCi/L	03/11/16 20:03	04/01/16 16:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.7*		*40 - 110*	*03/11/16 20:03*	*04/01/16 16:33*	*1*
Y Carrier	*80.4*		*40 - 110*	*03/11/16 20:03*	*04/01/16 16:33*	*1*

Method: 904.0 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.369		0.210	0.213	1.00	0.314	pCi/L	03/10/16 13:33	03/15/16 11:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.4*		*40 - 110*	*03/10/16 13:33*	*03/15/16 11:56*	*1*
Y Carrier	*87.9*		*40 - 110*	*03/10/16 13:33*	*03/15/16 11:56*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	51.8	U	207	207	500	374	pCi/L	03/29/16 12:57	03/30/16 18:09	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: PZ-203-SS

Lab Sample ID: 160-16405-4
Date Collected: 03/07/16 14:39
Matrix: Water
Date Received: 03/07/16 16:45

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	**0.413**		0.129	0.133	1.00	0.0811	pCi/L	03/22/16 13:44	03/29/16 11:07	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Thorium-229	*90.7*		*30 - 110*	*03/22/16 13:44*	*03/29/16 11:07*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**2.04**		0.316	0.359	1.00	0.134	pCi/L	03/22/16 13:44	03/29/16 11:12	1
Uranium-235/236	-0.0122	U	0.0173	0.0173	1.00	0.0966	pCi/L	03/22/16 13:44	03/29/16 11:12	1
Uranium-238	**0.433**		0.146	0.151	1.00	0.0870	pCi/L	03/22/16 13:44	03/29/16 11:12	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*73.9*		*30 - 110*	*03/22/16 13:44*	*03/29/16 11:12*	*1*

Client Sample ID: LCS-6B

Lab Sample ID: 160-16405-5
Date Collected: 03/07/16 16:10
Matrix: Water
Date Received: 03/07/16 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**180**		20	6.7	ug/L			03/11/16 01:55	1
Acetonitrile	ND		50	7.3	ug/L			03/11/16 01:55	1
Acrolein	ND		50	3.1	ug/L			03/11/16 01:55	1
Acrylonitrile	ND		50	1.7	ug/L			03/11/16 01:55	1
Allyl chloride	ND		10	0.39	ug/L			03/11/16 01:55	1
Benzene	**23**		5.0	0.25	ug/L			03/11/16 01:55	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/11/16 01:55	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/11/16 01:55	1
Bromoform	ND		5.0	0.37	ug/L			03/11/16 01:55	1
Carbon disulfide	**6.8**		5.0	0.37	ug/L			03/11/16 01:55	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/11/16 01:55	1
Chlorobenzene	**14**		5.0	0.38	ug/L			03/11/16 01:55	1
Chloroethane	ND		10	0.38	ug/L			03/11/16 01:55	1
Chloroform	ND		5.0	0.15	ug/L			03/11/16 01:55	1
Chloroprene	ND		5.0	0.39	ug/L			03/11/16 01:55	1
cis-1,2-Dichloroethene	**1.7**	**J**	5.0	0.16	ug/L			03/11/16 01:55	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/11/16 01:55	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/11/16 01:55	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/11/16 01:55	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/11/16 01:55	1
1,2-Dichlorobenzene	**2.3**	**J**	5.0	0.28	ug/L			03/11/16 01:55	1
1,3-Dichlorobenzene	**0.74**	**J**	5.0	0.23	ug/L			03/11/16 01:55	1
1,4-Dichlorobenzene	**32**		5.0	0.35	ug/L			03/11/16 01:55	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/11/16 01:55	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/11/16 01:55	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/11/16 01:55	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: LCS-6B

Date Collected: 03/07/16 16:10
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-5

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/11/16 01:55	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/11/16 01:55	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/11/16 01:55	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/11/16 01:55	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/11/16 01:55	1
Ethylbenzene	**53**		5.0	0.30	ug/L			03/11/16 01:55	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/11/16 01:55	1
2-Hexanone	ND		20	0.59	ug/L			03/11/16 01:55	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/11/16 01:55	1
Methacrylonitrile	ND		50	2.1	ug/L			03/11/16 01:55	1
Methyl bromide	ND		10	0.40	ug/L			03/11/16 01:55	1
Methyl chloride	ND		10	0.55	ug/L			03/11/16 01:55	1
Methylene bromide	ND		5.0	0.41	ug/L			03/11/16 01:55	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/11/16 01:55	1
Methyl iodide	ND		5.0	1.5	ug/L			03/11/16 01:55	1
Methyl methacrylate	ND		10	0.51	ug/L			03/11/16 01:55	1
4-Methyl-2-pentanone (MIBK)	**37**		20	0.33	ug/L			03/11/16 01:55	1
Propionitrile	ND		50	2.4	ug/L			03/11/16 01:55	1
Styrene	**5.5**		5.0	0.35	ug/L			03/11/16 01:55	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/11/16 01:55	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/11/16 01:55	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/11/16 01:55	1
Toluene	**99**		5.0	1.0	ug/L			03/11/16 01:55	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/11/16 01:55	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/11/16 01:55	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/11/16 01:55	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/11/16 01:55	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/11/16 01:55	1
Trichloroethene	ND		5.0	0.29	ug/L			03/11/16 01:55	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/11/16 01:55	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/11/16 01:55	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/11/16 01:55	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/11/16 01:55	1
Xylenes, Total	**150**		10	0.85	ug/L			03/11/16 01:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*71 - 139*		*03/11/16 01:55*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 121*		*03/11/16 01:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*76 - 121*		*03/11/16 01:55*	*1*
Toluene-d8 (Surr)	*101*		*80 - 129*		*03/11/16 01:55*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Ethyl Ketone	**190**		40	0.78	ug/L			03/20/16 18:34	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*71 - 139*		*03/20/16 18:34*	*2*
Dibromofluoromethane (Surr)	*99*		*80 - 121*		*03/20/16 18:34*	*2*
1,2-Dichloroethane-d4 (Surr)	*97*		*76 - 121*		*03/20/16 18:34*	*2*
Toluene-d8 (Surr)	*98*		*80 - 129*		*03/20/16 18:34*	*2*

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: LCS-6B

Date Collected: 03/07/16 16:10
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-5

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Acenaphthylene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Acetophenone	**20**		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2-Acetylaminofluorene	ND		200	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
4-Aminobiphenyl	ND		100	2.1	ug/L		03/11/16 14:43	03/24/16 22:22	1
Anthracene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Benzo[a]anthracene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Benzo[a]pyrene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Benzo[b]fluoranthene	ND	*	20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Benzo[g,h,i]perylene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Benzo[k]fluoranthene	ND	*	20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Benzyl alcohol	ND		20	6.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Bis(2-chloroethoxy)methane	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Bis(2-chloroethyl)ether	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
bis(2 chloro-1-methylethyl) ether	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Bis(2-ethylhexyl) phthalate	**21**		20	3.7	ug/L		03/11/16 14:43	03/24/16 22:22	1
4-Bromophenyl phenyl ether	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Butyl benzyl phthalate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
4-Chloroaniline	ND		20	4.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Chlorobenzilate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
4-Chloro-3-methylphenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2-Chloronaphthalene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2-Chlorophenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
4-Chlorophenyl phenyl ether	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Chrysene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Diallate	ND		40	4.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Dibenz(a,h)anthracene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Dibenzofuran	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
3,3'-Dichlorobenzidine	ND		100	2.6	ug/L		03/11/16 14:43	03/24/16 22:22	1
2,4-Dichlorophenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2,6-Dichlorophenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Diethyl phthalate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Dimethoate	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
7,12-Dimethylbenz(a)anthracene	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
3,3'-Dimethylbenzidine	ND		100	5.2	ug/L		03/11/16 14:43	03/24/16 22:22	1
2,4-Dimethylphenol	**28**		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Dimethyl phthalate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Di-n-butyl phthalate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
1,3-Dinitrobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
1,4-Dinitrobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
4,6-Dinitro-2-methylphenol	ND		20	2.5	ug/L		03/11/16 14:43	03/24/16 22:22	1
2,4-Dinitrophenol	ND	*	100	4.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2,4-Dinitrotoluene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2,6-Dinitrotoluene	ND		20	4.3	ug/L		03/11/16 14:43	03/24/16 22:22	1
Di-n-octyl phthalate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Dinoseb	ND		40	4.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Diphenylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Disulfoton	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Ethyl methanesulfonate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1

Client Sample ID: LCS-6B

Date Collected: 03/07/16 16:10
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-5

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Famphur	ND		200	3.4	ug/L		03/11/16 14:43	03/24/16 22:22	1
Fluoranthene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Fluorene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Hexachlorobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Hexachlorobutadiene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Hexachlorocyclopentadiene	ND	*	20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Hexachloroethane	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Hexachlorophene	ND		500	20	ug/L		03/11/16 14:43	03/24/16 22:22	1
Hexachloropropene	ND		200	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Indeno[1,2,3-cd]pyrene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Isodrin	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Isophorone	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Isosafrole	ND		40	10	ug/L		03/11/16 14:43	03/24/16 22:22	1
Methapyrilene	ND		100	2.5	ug/L		03/11/16 14:43	03/24/16 22:22	1
3-Methylcholanthrene	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Methyl methanesulfonate	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2-Methylnaphthalene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Methyl parathion	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2-Methylphenol	**24**		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Naphthalene	**18**	**J**	20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
1,4-Naphthoquinone	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
1-Naphthylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2-Naphthylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2-Nitroaniline	ND		20	2.2	ug/L		03/11/16 14:43	03/24/16 22:22	1
3-Nitroaniline	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
4-Nitroaniline	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Nitrobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
5-Nitro-o-toluidine	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2-Nitrophenol	ND		20	3.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
4-Nitrophenol	ND		20	4.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
N-Nitrosodiethylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
N-Nitrosodimethylamine	ND		20	4.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
N-Nitrosodi-n-butylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
N-Nitrosodi-n-propylamine	ND		20	3.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
N-Nitrosomethylethylamine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
N-Nitrosomorpholine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
N-Nitrosopiperidine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
N-Nitrosopyrrolidine	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
o,o',o''-Triethylphosphorothioate	ND		100	2.3	ug/L		03/11/16 14:43	03/24/16 22:22	1
o-Toluidine	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Parathion	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
p-Dimethylamino azobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Pentachlorobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Pentachloronitrobenzene	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Pentachlorophenol	ND		100	2.5	ug/L		03/11/16 14:43	03/24/16 22:22	1
Phenacetin	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Phenanthrene	**2.0**	**J**	20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Phenol	ND		20	4.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Phorate	ND		100	4.0	ug/L		03/11/16 14:43	03/24/16 22:22	1

Client Sample ID: LCS-6B

Date Collected: 03/07/16 16:10
Date Received: 03/07/16 16:45

Lab Sample ID: 160-16405-5

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Phenylene diamine	ND		200	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Pronamide	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Pyrene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Safrole	ND		40	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
1,2,4,5-Tetrachlorobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2,3,4,6-Tetrachlorophenol	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
Thionazin	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
1,2,4-Trichlorobenzene	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2,4,5-Trichlorophenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
2,4,6-Trichlorophenol	ND		20	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1
1,3,5-Trinitrobenzene	ND		100	2.0	ug/L		03/11/16 14:43	03/24/16 22:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*27*	*X*	*43 - 108*	*03/11/16 14:43*	*03/24/16 22:22*	*1*
2-Fluorophenol (Surr)	*22*		*15 - 59*	*03/11/16 14:43*	*03/24/16 22:22*	*1*
Nitrobenzene-d5 (Surr)	*32*	*X*	*50 - 101*	*03/11/16 14:43*	*03/24/16 22:22*	*1*
Phenol-d5 (Surr)	*22*		*10 - 50*	*03/11/16 14:43*	*03/24/16 22:22*	*1*
Terphenyl-d14 (Surr)	*14*	*X*	*21 - 97*	*03/11/16 14:43*	*03/24/16 22:22*	*1*
2,4,6-Tribromophenol (Surr)	*33*	*X*	*37 - 120*	*03/11/16 14:43*	*03/24/16 22:22*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	**770**		200	20	ug/L		03/11/16 14:43	04/05/16 19:40	5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kepone	ND		200	40	ug/L		03/11/16 14:43	04/05/16 23:07	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		50	19	ug/L		03/14/16 13:50	04/02/16 02:40	5
Arsenic	**140**		50	8.9	ug/L		03/14/16 13:50	04/06/16 19:15	5
Barium	**210**	**J**	250	11	ug/L		03/14/16 13:50	04/02/16 02:40	5
Beryllium	ND		25	1.4	ug/L		03/14/16 13:50	04/02/16 02:40	5
Boron	**2100**	**^**	250	36	ug/L		03/14/16 13:50	04/02/16 02:40	5
Cadmium	ND		25	1.7	ug/L		03/14/16 13:50	04/02/16 02:40	5
CaHard	**30000**	**B**	5000	270	ug/L		03/14/16 13:50	04/02/16 02:40	5
Calcium	**12000**		5000	270	ug/L		03/14/16 13:50	04/02/16 02:40	5
Chromium	**37**	**J**	50	17	ug/L		03/14/16 13:50	04/06/16 19:15	5
Cobalt	ND		250	14	ug/L		03/14/16 13:50	04/02/16 02:40	5
Copper	ND		130	11	ug/L		03/14/16 13:50	04/02/16 02:40	5
Iron	**4100**	**J**	5000	640	ug/L		04/08/16 12:39	04/11/16 12:53	10
Lead	ND		50	3.0	ug/L		03/14/16 13:50	04/02/16 02:40	5
Magnesium	**9.2**		5.0	0.25	mg/L		03/14/16 13:50	04/02/16 02:40	5
Manganese	**61**	**J**	75	5.0	ug/L		03/14/16 13:50	04/02/16 02:40	5
MgHard	**38000**	**B**	5000	250	ug/L		03/14/16 13:50	04/02/16 02:40	5
Nickel	**0.039**	**J**	0.20	0.013	mg/L		03/14/16 13:50	04/02/16 02:40	5
Phosphorus	**1300**	**B**	1300	69	ug/L		03/14/16 13:50	04/06/16 19:15	5
Selenium	ND		75	10	ug/L		03/14/16 13:50	04/02/16 02:40	5
Silver	**5.5**	**J**	100	5.0	ug/L		03/14/16 13:50	04/02/16 02:40	5

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: LCS-6B

Lab Sample ID: 160-16405-5
Date Collected: 03/07/16 16:10
Matrix: Water
Date Received: 03/07/16 16:45

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	370000		5000	530	ug/L		03/14/16 13:50	04/02/16 02:40	5
Thallium	17	J	100	12	ug/L		03/14/16 13:50	04/02/16 02:40	5
Total Hardness	68000		25000	8700	ug/L		03/14/16 13:50	04/02/16 02:40	5
Vanadium	ND		250	22	ug/L		03/14/16 13:50	04/02/16 02:40	5
Zinc	91	J	100	42	ug/L		03/14/16 13:50	04/02/16 02:40	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		1.2	0.36	ug/L		03/21/16 09:47	03/21/16 20:12	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-16405-6
Date Collected: 03/07/16 08:00
Matrix: Water
Date Received: 03/07/16 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 19:06	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 19:06	1
Acrolein	ND		50	3.1	ug/L			03/10/16 19:06	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 19:06	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 19:06	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 19:06	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 19:06	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 19:06	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 19:06	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 19:06	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 19:06	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 19:06	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 19:06	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 19:06	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 19:06	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 19:06	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 19:06	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 19:06	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 19:06	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 19:06	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 19:06	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 19:06	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 19:06	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 19:06	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 19:06	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 19:06	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 19:06	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 19:06	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 19:06	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 19:06	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 19:06	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 19:06	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 19:06	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 19:06	1

Client Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-16405-6

Date Collected: 03/07/16 08:00
Matrix: Water
Date Received: 03/07/16 16:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 19:06	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 19:06	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 19:06	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 19:06	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 19:06	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 19:06	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 19:06	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 19:06	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 19:06	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 19:06	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 19:06	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 19:06	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 19:06	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 19:06	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 19:06	1
Toluene	ND		5.0	1.0	ug/L			03/10/16 19:06	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 19:06	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 19:06	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 19:06	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 19:06	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 19:06	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 19:06	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 19:06	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 19:06	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 19:06	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 19:06	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*71 - 139*		*03/10/16 19:06*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 121*		*03/10/16 19:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*76 - 121*		*03/10/16 19:06*	*1*
Toluene-d8 (Surr)	*100*		*80 - 129*		*03/10/16 19:06*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 160-239988/7
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/10/16 17:24	1
Acetonitrile	ND		50	7.3	ug/L			03/10/16 17:24	1
Acrolein	ND		50	3.1	ug/L			03/10/16 17:24	1
Acrylonitrile	ND		50	1.7	ug/L			03/10/16 17:24	1
Allyl chloride	ND		10	0.39	ug/L			03/10/16 17:24	1
Benzene	ND		5.0	0.25	ug/L			03/10/16 17:24	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/10/16 17:24	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/10/16 17:24	1
Bromoform	ND		5.0	0.37	ug/L			03/10/16 17:24	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/10/16 17:24	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/10/16 17:24	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/10/16 17:24	1
Chloroethane	ND		10	0.38	ug/L			03/10/16 17:24	1
Chloroform	ND		5.0	0.15	ug/L			03/10/16 17:24	1
Chloroprene	ND		5.0	0.39	ug/L			03/10/16 17:24	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/10/16 17:24	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/10/16 17:24	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/10/16 17:24	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/10/16 17:24	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/10/16 17:24	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/10/16 17:24	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/10/16 17:24	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/10/16 17:24	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/10/16 17:24	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/10/16 17:24	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/10/16 17:24	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/10/16 17:24	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/10/16 17:24	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/10/16 17:24	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/10/16 17:24	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/10/16 17:24	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/10/16 17:24	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/10/16 17:24	1
2-Hexanone	ND		20	0.59	ug/L			03/10/16 17:24	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/10/16 17:24	1
Methacrylonitrile	ND		50	2.1	ug/L			03/10/16 17:24	1
Methyl bromide	ND		10	0.40	ug/L			03/10/16 17:24	1
Methyl chloride	ND		10	0.55	ug/L			03/10/16 17:24	1
Methylene bromide	ND		5.0	0.41	ug/L			03/10/16 17:24	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/10/16 17:24	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/10/16 17:24	1
Methyl iodide	ND		5.0	1.5	ug/L			03/10/16 17:24	1
Methyl methacrylate	ND		10	0.51	ug/L			03/10/16 17:24	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/10/16 17:24	1
Propionitrile	ND		50	2.4	ug/L			03/10/16 17:24	1
Styrene	ND		5.0	0.35	ug/L			03/10/16 17:24	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/10/16 17:24	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/10/16 17:24	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 160-239988/7
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.0	0.28	ug/L			03/10/16 17:24	1
Toluene	ND		5.0	1.0	ug/L			03/10/16 17:24	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/10/16 17:24	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/10/16 17:24	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/10/16 17:24	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/10/16 17:24	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/10/16 17:24	1
Trichloroethene	ND		5.0	0.29	ug/L			03/10/16 17:24	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/10/16 17:24	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/10/16 17:24	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/10/16 17:24	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/10/16 17:24	1
Xylenes, Total	ND		10	0.85	ug/L			03/10/16 17:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*71 - 139*		*03/10/16 17:24*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 121*		*03/10/16 17:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*76 - 121*		*03/10/16 17:24*	*1*
Toluene-d8 (Surr)	*98*		*80 - 129*		*03/10/16 17:24*	*1*

Lab Sample ID: LCS 160-239988/4
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	49.5		ug/L		99	63 - 131
Acetonitrile	500	438		ug/L		88	71 - 124
Acrolein	250	264		ug/L		106	45 - 140
Acrylonitrile	500	537		ug/L		107	81 - 117
Allyl chloride	50.0	52.2		ug/L		104	74 - 126
Benzene	50.0	50.1		ug/L		100	80 - 120
Bromochloromethane	50.0	51.1		ug/L		102	80 - 120
Bromodichloromethane	50.0	51.7		ug/L		103	80 - 120
Bromoform	50.0	53.8		ug/L		108	80 - 120
Carbon disulfide	50.0	53.4		ug/L		107	79 - 126
Carbon tetrachloride	50.0	50.8		ug/L		102	73 - 123
Chlorobenzene	50.0	48.8		ug/L		98	80 - 120
Chloroethane	50.0	50.6		ug/L		101	52 - 140
Chloroform	50.0	51.0		ug/L		102	80 - 120
Chloroprene	50.0	49.4		ug/L		99	80 - 120
cis-1,2-Dichloroethene	50.0	50.5		ug/L		101	80 - 120
cis-1,3-Dichloropropene	50.0	51.0		ug/L		102	80 - 122
Dibromochloromethane	50.0	52.3		ug/L		105	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	52.2		ug/L		104	77 - 125
1,2-Dibromoethane (EDB)	50.0	49.8		ug/L		100	80 - 120
1,2-Dichlorobenzene	50.0	48.2		ug/L		96	80 - 120
1,3-Dichlorobenzene	50.0	47.0		ug/L		94	80 - 120
1,4-Dichlorobenzene	50.0	48.2		ug/L		96	80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 160-239988/4
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	50.0	54.3		ug/L		109	62 - 140
1,1-Dichloroethane	50.0	50.2		ug/L		100	80 - 120
1,2-Dichloroethane	50.0	51.0		ug/L		102	69 - 124
1,1-Dichloroethene	50.0	52.0		ug/L		104	77 - 126
1,2-Dichloropropane	50.0	49.5		ug/L		99	80 - 120
1,3-Dichloropropane	50.0	50.2		ug/L		100	80 - 120
2,2-Dichloropropane	50.0	51.9		ug/L		104	69 - 130
1,1-Dichloropropene	50.0	49.9		ug/L		100	80 - 120
Ethylbenzene	50.0	49.5		ug/L		99	80 - 120
Ethyl methacrylate	50.0	56.9		ug/L		114	80 - 124
2-Hexanone	50.0	56.1		ug/L		112	64 - 136
Isobutyl alcohol	1250	1230		ug/L		99	54 - 140
Methacrylonitrile	500	517		ug/L		103	69 - 131
Methyl bromide	50.0	57.0		ug/L		114	57 - 139
Methyl chloride	50.0	51.0		ug/L		102	70 - 127
Methylene bromide	50.0	52.7		ug/L		105	78 - 120
Methylene Chloride	50.0	51.2		ug/L		102	80 - 120
Methyl Ethyl Ketone	50.0	57.5		ug/L		115	70 - 130
Methyl iodide	50.0	50.8		ug/L		102	73 - 125
Methyl methacrylate	100	107		ug/L		107	80 - 126
4-Methyl-2-pentanone (MIBK)	50.0	54.6		ug/L		109	76 - 129
Propionitrile	500	526		ug/L		105	78 - 120
Styrene	50.0	52.2		ug/L		104	80 - 120
1,1,1,2-Tetrachloroethane	50.0	50.2		ug/L		100	80 - 120
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/L		100	80 - 120
Tetrachloroethene	50.0	48.6		ug/L		97	80 - 120
Toluene	50.0	48.9		ug/L		98	80 - 120
trans-1,4-Dichloro-2-butene	50.0	54.4		ug/L		109	75 - 127
trans-1,2-Dichloroethene	50.0	50.4		ug/L		101	80 - 120
trans-1,3-Dichloropropene	50.0	52.0		ug/L		104	80 - 130
1,1,1-Trichloroethane	50.0	51.2		ug/L		102	76 - 120
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	80 - 120
Trichloroethene	50.0	48.5		ug/L		97	73 - 120
Trichlorofluoromethane	50.0	53.2		ug/L		106	74 - 130
1,2,3-Trichloropropane	50.0	53.1		ug/L		106	80 - 120
Vinyl acetate	50.0	58.9		ug/L		118	37 - 140
Vinyl chloride	50.0	49.7		ug/L		99	51 - 140
Xylenes, Total	100	98.0		ug/L		98	80 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*71 - 139*
Dibromofluoromethane (Surr)	*101*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*99*		*76 - 121*
Toluene-d8 (Surr)	*97*		*80 - 129*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 160-239988/5
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	47.6		ug/L		95	63 - 131	4	20
Acetonitrile	500	393		ug/L		79	71 - 124	11	20
Acrolein	250	242		ug/L		97	45 - 140	9	20
Acrylonitrile	500	496		ug/L		99	81 - 117	8	20
Allyl chloride	50.0	51.2		ug/L		102	74 - 126	2	20
Benzene	50.0	50.0		ug/L		100	80 - 120	0	20
Bromochloromethane	50.0	49.2		ug/L		98	80 - 120	4	20
Bromodichloromethane	50.0	52.0		ug/L		104	80 - 120	1	20
Bromoform	50.0	52.5		ug/L		105	80 - 120	3	20
Carbon disulfide	50.0	51.6		ug/L		103	79 - 126	3	20
Carbon tetrachloride	50.0	49.5		ug/L		99	73 - 123	3	20
Chlorobenzene	50.0	48.9		ug/L		98	80 - 120	0	20
Chloroethane	50.0	48.6		ug/L		97	52 - 140	4	20
Chloroform	50.0	50.5		ug/L		101	80 - 120	1	20
Chloroprene	50.0	49.2		ug/L		98	80 - 120	0	20
cis-1,2-Dichloroethene	50.0	49.9		ug/L		100	80 - 120	1	20
cis-1,3-Dichloropropene	50.0	51.6		ug/L		103	80 - 122	1	20
Dibromochloromethane	50.0	50.8		ug/L		102	80 - 120	3	20
1,2-Dibromo-3-Chloropropane	50.0	55.2		ug/L		110	77 - 125	6	20
1,2-Dibromoethane (EDB)	50.0	49.6		ug/L		99	80 - 120	0	20
1,2-Dichlorobenzene	50.0	47.7		ug/L		95	80 - 120	1	20
1,3-Dichlorobenzene	50.0	47.0		ug/L		94	80 - 120	0	20
1,4-Dichlorobenzene	50.0	48.0		ug/L		96	80 - 120	0	20
Dichlorodifluoromethane	50.0	50.3		ug/L		101	62 - 140	8	20
1,1-Dichloroethane	50.0	49.9		ug/L		100	80 - 120	1	20
1,2-Dichloroethane	50.0	50.9		ug/L		102	69 - 124	0	20
1,1-Dichloroethene	50.0	49.7		ug/L		99	77 - 126	4	20
1,2-Dichloropropane	50.0	50.2		ug/L		100	80 - 120	1	20
1,3-Dichloropropane	50.0	49.0		ug/L		98	80 - 120	2	20
2,2-Dichloropropane	50.0	49.8		ug/L		100	69 - 130	4	20
1,1-Dichloropropene	50.0	48.7		ug/L		97	80 - 120	2	20
Ethylbenzene	50.0	49.6		ug/L		99	80 - 120	0	20
Ethyl methacrylate	50.0	54.1		ug/L		108	80 - 124	5	20
2-Hexanone	50.0	52.7		ug/L		105	64 - 136	6	20
Isobutyl alcohol	1250	1110		ug/L		89	54 - 140	11	20
Methacrylonitrile	500	499		ug/L		100	69 - 131	3	20
Methyl bromide	50.0	53.6		ug/L		107	57 - 139	6	20
Methyl chloride	50.0	48.5		ug/L		97	70 - 127	5	20
Methylene bromide	50.0	50.9		ug/L		102	78 - 120	4	20
Methylene Chloride	50.0	50.0		ug/L		100	80 - 120	3	20
Methyl Ethyl Ketone	50.0	53.9		ug/L		108	70 - 130	6	20
Methyl iodide	50.0	49.4		ug/L		99	73 - 125	3	20
Methyl methacrylate	100	105		ug/L		105	80 - 126	1	20
4-Methyl-2-pentanone (MIBK)	50.0	52.1		ug/L		104	76 - 129	5	20
Propionitrile	500	507		ug/L		101	78 - 120	4	20
Styrene	50.0	52.4		ug/L		105	80 - 120	0	20
1,1,1,2-Tetrachloroethane	50.0	50.3		ug/L		101	80 - 120	0	20
1,1,2,2-Tetrachloroethane	50.0	48.7		ug/L		97	80 - 120	2	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 160-239988/5
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene			50.0	47.2		ug/L		94	80 - 120	3	20
Toluene			50.0	48.5		ug/L		97	80 - 120	1	20
trans-1,4-Dichloro-2-butene			50.0	52.4		ug/L		105	75 - 127	4	20
trans-1,2-Dichloroethene			50.0	49.4		ug/L		99	80 - 120	2	20
trans-1,3-Dichloropropene			50.0	51.0		ug/L		102	80 - 130	2	20
1,1,1-Trichloroethane			50.0	49.9		ug/L		100	76 - 120	2	20
1,1,2-Trichloroethane			50.0	49.9		ug/L		100	80 - 120	2	20
Trichloroethene			50.0	48.4		ug/L		97	73 - 120	0	20
Trichlorofluoromethane			50.0	51.0		ug/L		102	74 - 130	4	20
1,2,3-Trichloropropane			50.0	49.7		ug/L		99	80 - 120	7	20
Vinyl acetate			50.0	50.1		ug/L		100	37 - 140	16	20
Vinyl chloride			50.0	48.3		ug/L		97	51 - 140	3	20
Xylenes, Total			100	96.9		ug/L		97	80 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*71 - 139*
Dibromofluoromethane (Surr)	*99*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*98*		*76 - 121*
Toluene-d8 (Surr)	*97*		*80 - 129*

Lab Sample ID: 160-16391-J-1 MS
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acetone	ND		50.0	50.7		ug/L		101	52 - 138		
Acetonitrile	ND		500	490		ug/L		98	57 - 140		
Acrolein	ND		250	257		ug/L		103	40 - 150		
Acrylonitrile	ND		500	545		ug/L		109	58 - 142		
Allyl chloride	ND		50.0	51.8		ug/L		104	74 - 124		
Benzene	ND		50.0	50.6		ug/L		101	80 - 120		
Bromochloromethane	ND		50.0	52.3		ug/L		105	72 - 125		
Bromodichloromethane	ND		50.0	53.0		ug/L		106	71 - 128		
Bromoform	ND		50.0	52.6		ug/L		105	65 - 133		
Carbon disulfide	ND		50.0	52.7		ug/L		105	69 - 139		
Carbon tetrachloride	ND		50.0	49.7		ug/L		99	70 - 126		
Chlorobenzene	5.8		50.0	54.0		ug/L		96	80 - 120		
Chloroethane	ND		50.0	53.1		ug/L		106	59 - 144		
Chloroform	ND		50.0	52.0		ug/L		104	80 - 120		
Chloroprene	ND		50.0	48.3		ug/L		97	77 - 121		
cis-1,2-Dichloroethene	ND		50.0	51.4		ug/L		103	80 - 124		
cis-1,3-Dichloropropene	ND		50.0	51.2		ug/L		102	67 - 130		
Dibromochloromethane	ND		50.0	52.6		ug/L		105	68 - 133		
1,2-Dibromo-3-Chloropropane	ND		50.0	55.1		ug/L		110	58 - 148		
1,2-Dibromoethane (EDB)	ND		50.0	50.4		ug/L		101	65 - 138		
1,2-Dichlorobenzene	ND		50.0	48.4		ug/L		97	80 - 124		
1,3-Dichlorobenzene	ND		50.0	46.9		ug/L		94	80 - 120		
1,4-Dichlorobenzene	0.70	J	50.0	48.4		ug/L		95	80 - 120		

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16391-J-1 MS
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	ND		50.0	51.7		ug/L		103	65 - 140
1,1-Dichloroethane	ND		50.0	51.0		ug/L		102	80 - 120
1,2-Dichloroethane	ND		50.0	52.4		ug/L		105	56 - 136
1,1-Dichloroethene	ND		50.0	49.9		ug/L		100	66 - 137
1,2-Dichloropropane	ND		50.0	50.5		ug/L		101	80 - 123
1,3-Dichloropropane	ND		50.0	50.8		ug/L		102	70 - 136
2,2-Dichloropropane	ND		50.0	50.1		ug/L		100	54 - 148
1,1-Dichloropropene	ND		50.0	50.4		ug/L		101	80 - 121
Ethylbenzene	ND		50.0	48.5		ug/L		97	80 - 121
Ethyl methacrylate	ND		50.0	55.3		ug/L		111	62 - 142
2-Hexanone	ND		50.0	51.2		ug/L		102	47 - 150
Isobutyl alcohol	ND		1250	1020		ug/L		82	48 - 150
Methacrylonitrile	ND		500	533		ug/L		107	54 - 149
Methyl bromide	ND		50.0	55.9		ug/L		112	53 - 146
Methyl chloride	ND		50.0	43.3		ug/L		87	61 - 137
Methylene bromide	ND		50.0	52.9		ug/L		106	61 - 136
Methylene Chloride	ND		50.0	51.8		ug/L		104	80 - 120
Methyl Ethyl Ketone	ND		50.0	55.4		ug/L		111	58 - 143
Methyl iodide	ND		50.0	51.8		ug/L		104	69 - 124
Methyl methacrylate	ND		100	105		ug/L		105	56 - 150
4-Methyl-2-pentanone (MIBK)	ND		50.0	54.5		ug/L		109	53 - 150
Propionitrile	ND		500	538		ug/L		108	57 - 142
Styrene	ND		50.0	52.2		ug/L		104	44 - 150
1,1,1,2-Tetrachloroethane	ND		50.0	50.2		ug/L		100	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	49.8		ug/L		100	60 - 150
Tetrachloroethene	ND		50.0	47.2		ug/L		94	66 - 132
Toluene	ND		50.0	48.1		ug/L		96	75 - 134
trans-1,4-Dichloro-2-butene	ND		50.0	50.2		ug/L		100	55 - 146
trans-1,2-Dichloroethene	ND		50.0	49.3		ug/L		99	79 - 121
trans-1,3-Dichloropropene	ND		50.0	50.8		ug/L		102	68 - 143
1,1,1-Trichloroethane	ND		50.0	50.8		ug/L		102	74 - 123
1,1,2-Trichloroethane	ND		50.0	54.6		ug/L		109	70 - 134
Trichloroethene	ND		50.0	48.0		ug/L		96	63 - 120
Trichlorofluoromethane	ND		50.0	51.2		ug/L		102	53 - 150
1,2,3-Trichloropropane	ND		50.0	49.4		ug/L		99	62 - 137
Vinyl acetate	ND		50.0	56.6		ug/L		113	63 - 150
Vinyl chloride	ND		50.0	48.0		ug/L		96	54 - 140
Xylenes, Total	ND		100	97.9		ug/L		98	80 - 124

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*71 - 139*
Dibromofluoromethane (Surr)	*103*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*105*		*76 - 121*
Toluene-d8 (Surr)	*97*		*80 - 129*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16391-J-1 MSD
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		50.0	52.8		ug/L		106	52 - 138	4	20
Acetonitrile	ND		500	556		ug/L		111	57 - 140	13	20
Acrolein	ND		250	264		ug/L		106	40 - 150	3	20
Acrylonitrile	ND		500	580		ug/L		116	58 - 142	6	20
Allyl chloride	ND		50.0	54.0		ug/L		108	74 - 124	4	20
Benzene	ND		50.0	51.5		ug/L		103	80 - 120	2	20
Bromochloromethane	ND		50.0	53.6		ug/L		107	72 - 125	2	20
Bromodichloromethane	ND		50.0	54.9		ug/L		110	71 - 128	3	20
Bromoform	ND		50.0	54.4		ug/L		109	65 - 133	4	20
Carbon disulfide	ND		50.0	53.4		ug/L		107	69 - 139	1	20
Carbon tetrachloride	ND		50.0	51.0		ug/L		102	70 - 126	2	20
Chlorobenzene	5.8		50.0	54.2		ug/L		97	80 - 120	0	20
Chloroethane	ND		50.0	54.1		ug/L		108	59 - 144	2	20
Chloroform	ND		50.0	52.7		ug/L		105	80 - 120	1	20
Chloroprene	ND		50.0	49.0		ug/L		98	77 - 121	2	20
cis-1,2-Dichloroethene	ND		50.0	51.0		ug/L		102	80 - 124	1	20
cis-1,3-Dichloropropene	ND		50.0	53.2		ug/L		106	67 - 130	4	20
Dibromochloromethane	ND		50.0	52.3		ug/L		105	68 - 133	1	20
1,2-Dibromo-3-Chloropropane	ND		50.0	53.0		ug/L		106	58 - 148	4	20
1,2-Dibromoethane (EDB)	ND		50.0	53.0		ug/L		106	65 - 138	5	20
1,2-Dichlorobenzene	ND		50.0	47.9		ug/L		96	80 - 124	1	20
1,3-Dichlorobenzene	ND		50.0	46.5		ug/L		93	80 - 120	1	20
1,4-Dichlorobenzene	0.70	J	50.0	48.6		ug/L		96	80 - 120	0	20
Dichlorodifluoromethane	ND		50.0	51.9		ug/L		104	65 - 140	0	20
1,1-Dichloroethane	ND		50.0	52.1		ug/L		104	80 - 120	2	20
1,2-Dichloroethane	ND		50.0	55.0		ug/L		110	56 - 136	5	20
1,1-Dichloroethene	ND		50.0	50.5		ug/L		101	66 - 137	1	20
1,2-Dichloropropane	ND		50.0	52.7		ug/L		105	80 - 123	4	20
1,3-Dichloropropane	ND		50.0	51.4		ug/L		103	70 - 136	1	20
2,2-Dichloropropane	ND		50.0	49.1		ug/L		98	54 - 148	2	20
1,1-Dichloropropene	ND		50.0	51.5		ug/L		103	80 - 121	2	20
Ethylbenzene	ND		50.0	48.4		ug/L		97	80 - 121	0	20
Ethyl methacrylate	ND		50.0	58.7		ug/L		117	62 - 142	6	20
2-Hexanone	ND		50.0	56.7		ug/L		113	47 - 150	10	20
Isobutyl alcohol	ND		1250	1140		ug/L		91	48 - 150	11	20
Methacrylonitrile	ND		500	571		ug/L		114	54 - 149	7	20
Methyl bromide	ND		50.0	54.4		ug/L		109	53 - 146	3	20
Methyl chloride	ND		50.0	44.0		ug/L		88	61 - 137	2	20
Methylene bromide	ND		50.0	55.9		ug/L		112	61 - 136	6	20
Methylene Chloride	ND		50.0	52.4		ug/L		105	80 - 120	1	20
Methyl Ethyl Ketone	ND		50.0	61.3		ug/L		123	58 - 143	10	20
Methyl iodide	ND		50.0	51.8		ug/L		104	69 - 124	0	20
Methyl methacrylate	ND		100	113		ug/L		113	56 - 150	7	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	56.5		ug/L		113	53 - 150	4	20
Propionitrile	ND		500	587		ug/L		117	57 - 142	9	20
Styrene	ND		50.0	51.4		ug/L		103	44 - 150	2	20
1,1,1,2-Tetrachloroethane	ND		50.0	50.6		ug/L		101	80 - 120	1	20
1,1,2,2-Tetrachloroethane	ND		50.0	51.5		ug/L		103	60 - 150	3	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16391-J-1 MSD
Matrix: Water
Analysis Batch: 239988

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	ND		50.0	46.3		ug/L		93	66 - 132	2	20
Toluene	ND		50.0	48.1		ug/L		96	75 - 134	0	20
trans-1,4-Dichloro-2-butene	ND		50.0	52.2		ug/L		104	55 - 146	4	20
trans-1,2-Dichloroethene	ND		50.0	50.5		ug/L		101	79 - 121	2	20
trans-1,3-Dichloropropene	ND		50.0	52.6		ug/L		105	68 - 143	3	20
1,1,1-Trichloroethane	ND		50.0	51.7		ug/L		103	74 - 123	2	20
1,1,2-Trichloroethane	ND		50.0	56.6		ug/L		113	70 - 134	4	20
Trichloroethene	ND		50.0	49.5		ug/L		99	63 - 120	3	20
Trichlorofluoromethane	ND		50.0	52.1		ug/L		104	53 - 150	2	20
1,2,3-Trichloropropane	ND		50.0	51.7		ug/L		103	62 - 137	5	20
Vinyl acetate	ND		50.0	59.9		ug/L		120	63 - 150	6	20
Vinyl chloride	ND		50.0	49.6		ug/L		99	54 - 140	3	20
Xylenes, Total	ND		100	95.6		ug/L		96	80 - 124	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*71 - 139*
Dibromofluoromethane (Surr)	*104*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*108*		*76 - 121*
Toluene-d8 (Surr)	*95*		*80 - 129*

Lab Sample ID: MB 160-241303/6
Matrix: Water
Analysis Batch: 241303

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			03/20/16 18:08	1
Acetonitrile	ND		50	7.3	ug/L			03/20/16 18:08	1
Acrolein	ND		50	3.1	ug/L			03/20/16 18:08	1
Acrylonitrile	ND		50	1.7	ug/L			03/20/16 18:08	1
Allyl chloride	ND		10	0.39	ug/L			03/20/16 18:08	1
Benzene	ND		5.0	0.25	ug/L			03/20/16 18:08	1
Bromochloromethane	ND		5.0	0.55	ug/L			03/20/16 18:08	1
Bromodichloromethane	ND		5.0	0.25	ug/L			03/20/16 18:08	1
Bromoform	ND		5.0	0.37	ug/L			03/20/16 18:08	1
Carbon disulfide	ND		5.0	0.37	ug/L			03/20/16 18:08	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			03/20/16 18:08	1
Chlorobenzene	ND		5.0	0.38	ug/L			03/20/16 18:08	1
Chloroethane	ND		10	0.38	ug/L			03/20/16 18:08	1
Chloroform	ND		5.0	0.15	ug/L			03/20/16 18:08	1
Chloroprene	ND		5.0	0.39	ug/L			03/20/16 18:08	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			03/20/16 18:08	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			03/20/16 18:08	1
Dibromochloromethane	ND		5.0	0.33	ug/L			03/20/16 18:08	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			03/20/16 18:08	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			03/20/16 18:08	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			03/20/16 18:08	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			03/20/16 18:08	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			03/20/16 18:08	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 160-241303/6
Matrix: Water
Analysis Batch: 241303

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	0.45	ug/L			03/20/16 18:08	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			03/20/16 18:08	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			03/20/16 18:08	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			03/20/16 18:08	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			03/20/16 18:08	1
1,3-Dichloropropane	ND		5.0	0.24	ug/L			03/20/16 18:08	1
2,2-Dichloropropane	ND		5.0	0.54	ug/L			03/20/16 18:08	1
1,1-Dichloropropene	ND		5.0	0.30	ug/L			03/20/16 18:08	1
Ethylbenzene	ND		5.0	0.30	ug/L			03/20/16 18:08	1
Ethyl methacrylate	ND		5.0	0.25	ug/L			03/20/16 18:08	1
2-Hexanone	ND		20	0.59	ug/L			03/20/16 18:08	1
Isobutyl alcohol	ND		200	7.3	ug/L			03/20/16 18:08	1
Methacrylonitrile	ND		50	2.1	ug/L			03/20/16 18:08	1
Methyl bromide	ND		10	0.40	ug/L			03/20/16 18:08	1
Methyl chloride	ND		10	0.55	ug/L			03/20/16 18:08	1
Methylene bromide	ND		5.0	0.41	ug/L			03/20/16 18:08	1
Methylene Chloride	ND		5.0	1.7	ug/L			03/20/16 18:08	1
Methyl Ethyl Ketone	ND		20	0.39	ug/L			03/20/16 18:08	1
Methyl iodide	ND		5.0	1.5	ug/L			03/20/16 18:08	1
Methyl methacrylate	ND		10	0.51	ug/L			03/20/16 18:08	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			03/20/16 18:08	1
Propionitrile	ND		50	2.4	ug/L			03/20/16 18:08	1
Styrene	ND		5.0	0.35	ug/L			03/20/16 18:08	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.25	ug/L			03/20/16 18:08	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			03/20/16 18:08	1
Tetrachloroethene	ND		5.0	0.28	ug/L			03/20/16 18:08	1
Toluene	ND		5.0	1.0	ug/L			03/20/16 18:08	1
trans-1,4-Dichloro-2-butene	ND		10	0.95	ug/L			03/20/16 18:08	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			03/20/16 18:08	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			03/20/16 18:08	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			03/20/16 18:08	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			03/20/16 18:08	1
Trichloroethene	ND		5.0	0.29	ug/L			03/20/16 18:08	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			03/20/16 18:08	1
1,2,3-Trichloropropane	ND		5.0	0.56	ug/L			03/20/16 18:08	1
Vinyl acetate	ND		5.0	0.61	ug/L			03/20/16 18:08	1
Vinyl chloride	ND		5.0	0.43	ug/L			03/20/16 18:08	1
Xylenes, Total	ND		10	0.85	ug/L			03/20/16 18:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*71 - 139*		*03/20/16 18:08*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 121*		*03/20/16 18:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*76 - 121*		*03/20/16 18:08*	*1*
Toluene-d8 (Surr)	*95*		*80 - 129*		*03/20/16 18:08*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 160-241303/3
Matrix: Water
Analysis Batch: 241303

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	47.5		ug/L		95	63 - 131
Acetonitrile	500	435		ug/L		87	71 - 124
Acrolein	250	227		ug/L		91	45 - 140
Acrylonitrile	500	513		ug/L		103	81 - 117
Allyl chloride	50.0	50.4		ug/L		101	74 - 126
Benzene	50.0	50.1		ug/L		100	80 - 120
Bromochloromethane	50.0	50.3		ug/L		101	80 - 120
Bromodichloromethane	50.0	51.3		ug/L		103	80 - 120
Bromoform	50.0	49.5		ug/L		99	80 - 120
Carbon disulfide	50.0	52.9		ug/L		106	79 - 126
Carbon tetrachloride	50.0	48.8		ug/L		98	73 - 123
Chlorobenzene	50.0	47.7		ug/L		95	80 - 120
Chloroethane	50.0	44.2		ug/L		88	52 - 140
Chloroform	50.0	50.4		ug/L		101	80 - 120
Chloroprene	50.0	48.1		ug/L		96	80 - 120
cis-1,2-Dichloroethene	50.0	50.5		ug/L		101	80 - 120
cis-1,3-Dichloropropene	50.0	49.5		ug/L		99	80 - 122
Dibromochloromethane	50.0	52.4		ug/L		105	80 - 120
1,2-Dibromo-3-Chloropropane	50.0	50.2		ug/L		100	77 - 125
1,2-Dibromoethane (EDB)	50.0	49.4		ug/L		99	80 - 120
1,2-Dichlorobenzene	50.0	49.1		ug/L		98	80 - 120
1,3-Dichlorobenzene	50.0	47.4		ug/L		95	80 - 120
1,4-Dichlorobenzene	50.0	48.4		ug/L		97	80 - 120
Dichlorodifluoromethane	50.0	50.9		ug/L		102	62 - 140
1,1-Dichloroethane	50.0	50.7		ug/L		101	80 - 120
1,2-Dichloroethane	50.0	49.3		ug/L		99	69 - 124
1,1-Dichloroethene	50.0	50.9		ug/L		102	77 - 126
1,2-Dichloropropane	50.0	51.2		ug/L		102	80 - 120
1,3-Dichloropropane	50.0	50.8		ug/L		102	80 - 120
2,2-Dichloropropane	50.0	48.1		ug/L		96	69 - 130
1,1-Dichloropropene	50.0	48.0		ug/L		96	80 - 120
Ethylbenzene	50.0	47.3		ug/L		95	80 - 120
Ethyl methacrylate	50.0	53.3		ug/L		107	80 - 124
2-Hexanone	50.0	48.7		ug/L		97	64 - 136
Isobutyl alcohol	1250	1180		ug/L		95	54 - 140
Methacrylonitrile	500	490		ug/L		98	69 - 131
Methyl bromide	50.0	49.4		ug/L		99	57 - 139
Methyl chloride	50.0	51.0		ug/L		102	70 - 127
Methylene bromide	50.0	49.3		ug/L		99	78 - 120
Methylene Chloride	50.0	52.0		ug/L		104	80 - 120
Methyl Ethyl Ketone	50.0	51.9		ug/L		104	70 - 130
Methyl iodide	50.0	49.9		ug/L		100	73 - 125
Methyl methacrylate	100	95.0		ug/L		95	80 - 126
4-Methyl-2-pentanone (MIBK)	50.0	52.5		ug/L		105	76 - 129
Propionitrile	500	499		ug/L		100	78 - 120
Styrene	50.0	52.9		ug/L		106	80 - 120
1,1,1,2-Tetrachloroethane	50.0	53.8		ug/L		108	80 - 120
1,1,2,2-Tetrachloroethane	50.0	49.1		ug/L		98	80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 160-241303/3
Matrix: Water
Analysis Batch: 241303

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	50.0	48.6		ug/L		97	80 - 120
Toluene	50.0	50.7		ug/L		101	80 - 120
trans-1,4-Dichloro-2-butene	50.0	51.4		ug/L		103	75 - 127
trans-1,2-Dichloroethene	50.0	49.5		ug/L		99	80 - 120
trans-1,3-Dichloropropene	50.0	51.6		ug/L		103	80 - 130
1,1,1-Trichloroethane	50.0	48.8		ug/L		98	76 - 120
1,1,2-Trichloroethane	50.0	49.7		ug/L		99	80 - 120
Trichloroethene	50.0	47.7		ug/L		95	73 - 120
Trichlorofluoromethane	50.0	45.1		ug/L		90	74 - 130
1,2,3-Trichloropropane	50.0	49.1		ug/L		98	80 - 120
Vinyl acetate	50.0	48.2		ug/L		96	37 - 140
Vinyl chloride	50.0	46.3		ug/L		93	51 - 140
Xylenes, Total	100	99.0		ug/L		99	80 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*71 - 139*
Dibromofluoromethane (Surr)	*100*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*96*		*76 - 121*
Toluene-d8 (Surr)	*103*		*80 - 129*

Lab Sample ID: LCSD 160-241303/4
Matrix: Water
Analysis Batch: 241303

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	47.1		ug/L		94	63 - 131	1	20
Acetonitrile	500	435		ug/L		87	71 - 124	0	20
Acrolein	250	224		ug/L		89	45 - 140	2	20
Acrylonitrile	500	495		ug/L		99	81 - 117	4	20
Allyl chloride	50.0	50.4		ug/L		101	74 - 126	0	20
Benzene	50.0	49.1		ug/L		98	80 - 120	2	20
Bromochloromethane	50.0	49.6		ug/L		99	80 - 120	1	20
Bromodichloromethane	50.0	49.5		ug/L		99	80 - 120	4	20
Bromoform	50.0	51.0		ug/L		102	80 - 120	3	20
Carbon disulfide	50.0	51.3		ug/L		103	79 - 126	3	20
Carbon tetrachloride	50.0	47.4		ug/L		95	73 - 123	3	20
Chlorobenzene	50.0	47.7		ug/L		95	80 - 120	0	20
Chloroethane	50.0	43.1		ug/L		86	52 - 140	3	20
Chloroform	50.0	49.1		ug/L		98	80 - 120	3	20
Chloroprene	50.0	47.1		ug/L		94	80 - 120	2	20
cis-1,2-Dichloroethene	50.0	49.6		ug/L		99	80 - 120	2	20
cis-1,3-Dichloropropene	50.0	50.2		ug/L		100	80 - 122	1	20
Dibromochloromethane	50.0	49.8		ug/L		100	80 - 120	5	20
1,2-Dibromo-3-Chloropropane	50.0	51.6		ug/L		103	77 - 125	3	20
1,2-Dibromoethane (EDB)	50.0	51.0		ug/L		102	80 - 120	3	20
1,2-Dichlorobenzene	50.0	47.8		ug/L		96	80 - 120	3	20
1,3-Dichlorobenzene	50.0	46.4		ug/L		93	80 - 120	2	20
1,4-Dichlorobenzene	50.0	46.9		ug/L		94	80 - 120	3	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 160-241303/4
Matrix: Water
Analysis Batch: 241303

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dichlorodifluoromethane			50.0	48.6		ug/L		97	62 - 140	5	20
1,1-Dichloroethane			50.0	49.7		ug/L		99	80 - 120	2	20
1,2-Dichloroethane			50.0	48.9		ug/L		98	69 - 124	1	20
1,1-Dichloroethene			50.0	47.8		ug/L		96	77 - 126	6	20
1,2-Dichloropropane			50.0	48.9		ug/L		98	80 - 120	4	20
1,3-Dichloropropane			50.0	46.4		ug/L		93	80 - 120	9	20
2,2-Dichloropropane			50.0	46.6		ug/L		93	69 - 130	3	20
1,1-Dichloropropene			50.0	47.6		ug/L		95	80 - 120	1	20
Ethylbenzene			50.0	47.9		ug/L		96	80 - 120	1	20
Ethyl methacrylate			50.0	52.5		ug/L		105	80 - 124	1	20
2-Hexanone			50.0	51.0		ug/L		102	64 - 136	5	20
Isobutyl alcohol			1250	1230		ug/L		98	54 - 140	4	20
Methacrylonitrile			500	487		ug/L		97	69 - 131	1	20
Methyl bromide			50.0	48.9		ug/L		98	57 - 139	1	20
Methyl chloride			50.0	48.9		ug/L		98	70 - 127	4	20
Methylene bromide			50.0	49.6		ug/L		99	78 - 120	1	20
Methylene Chloride			50.0	51.1		ug/L		102	80 - 120	2	20
Methyl Ethyl Ketone			50.0	52.5		ug/L		105	70 - 130	1	20
Methyl iodide			50.0	48.8		ug/L		98	73 - 125	2	20
Methyl methacrylate			100	98.8		ug/L		99	80 - 126	4	20
4-Methyl-2-pentanone (MIBK)			50.0	48.1		ug/L		96	76 - 129	9	20
Propionitrile			500	486		ug/L		97	78 - 120	3	20
Styrene			50.0	51.5		ug/L		103	80 - 120	3	20
1,1,1,2-Tetrachloroethane			50.0	51.0		ug/L		102	80 - 120	5	20
1,1,2,2-Tetrachloroethane			50.0	48.1		ug/L		96	80 - 120	2	20
Tetrachloroethene			50.0	43.3		ug/L		87	80 - 120	11	20
Toluene			50.0	46.8		ug/L		94	80 - 120	8	20
trans-1,4-Dichloro-2-butene			50.0	51.2		ug/L		102	75 - 127	1	20
trans-1,2-Dichloroethene			50.0	47.2		ug/L		94	80 - 120	5	20
trans-1,3-Dichloropropene			50.0	47.5		ug/L		95	80 - 130	8	20
1,1,1-Trichloroethane			50.0	48.0		ug/L		96	76 - 120	2	20
1,1,2-Trichloroethane			50.0	47.6		ug/L		95	80 - 120	4	20
Trichloroethene			50.0	46.1		ug/L		92	73 - 120	3	20
Trichlorofluoromethane			50.0	43.0		ug/L		86	74 - 130	5	20
1,2,3-Trichloropropane			50.0	49.4		ug/L		99	80 - 120	1	20
Vinyl acetate			50.0	55.0		ug/L		110	37 - 140	13	20
Vinyl chloride			50.0	45.7		ug/L		91	51 - 140	1	20
Xylenes, Total			100	96.5		ug/L		97	80 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*71 - 139*
Dibromofluoromethane (Surr)	*97*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*96*		*76 - 121*
Toluene-d8 (Surr)	*93*		*80 - 129*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16445-G-1 MS
Matrix: Water
Analysis Batch: 241303

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		50.0	50.6		ug/L		101	52 - 138
Acetonitrile	ND		500	488		ug/L		98	57 - 140
Acrolein	ND		250	254		ug/L		102	40 - 150
Acrylonitrile	ND		500	568		ug/L		114	58 - 142
Allyl chloride	ND		50.0	54.9		ug/L		110	74 - 124
Benzene	ND		50.0	54.0		ug/L		108	80 - 120
Bromochloromethane	ND		50.0	55.3		ug/L		111	72 - 125
Bromodichloromethane	ND		50.0	55.8		ug/L		112	71 - 128
Bromoform	ND		50.0	55.5		ug/L		111	65 - 133
Carbon disulfide	ND		50.0	55.3		ug/L		111	69 - 139
Carbon tetrachloride	ND		50.0	50.6		ug/L		101	70 - 126
Chlorobenzene	ND		50.0	51.8		ug/L		104	80 - 120
Chloroethane	ND		50.0	48.4		ug/L		97	59 - 144
Chloroform	ND		50.0	55.1		ug/L		110	80 - 120
Chloroprene	ND		50.0	50.0		ug/L		100	77 - 121
cis-1,2-Dichloroethene	ND		50.0	54.5		ug/L		109	80 - 124
cis-1,3-Dichloropropene	ND		50.0	55.1		ug/L		110	67 - 130
Dibromochloromethane	ND		50.0	56.4		ug/L		113	68 - 133
1,2-Dibromo-3-Chloropropane	ND		50.0	56.1		ug/L		112	58 - 148
1,2-Dibromoethane (EDB)	ND		50.0	51.6		ug/L		103	65 - 138
1,2-Dichlorobenzene	ND		50.0	53.0		ug/L		106	80 - 124
1,3-Dichlorobenzene	ND		50.0	52.1		ug/L		104	80 - 120
1,4-Dichlorobenzene	ND		50.0	51.2		ug/L		102	80 - 120
Dichlorodifluoromethane	ND		50.0	52.6		ug/L		105	65 - 140
1,1-Dichloroethane	ND		50.0	54.9		ug/L		110	80 - 120
1,2-Dichloroethane	ND		50.0	55.0		ug/L		110	56 - 136
1,1-Dichloroethene	ND		50.0	53.1		ug/L		106	66 - 137
1,2-Dichloropropane	ND		50.0	54.4		ug/L		109	80 - 123
1,3-Dichloropropane	ND		50.0	55.2		ug/L		110	70 - 136
2,2-Dichloropropane	ND		50.0	49.9		ug/L		100	54 - 148
1,1-Dichloropropene	ND		50.0	51.6		ug/L		103	80 - 121
Ethylbenzene	ND		50.0	51.3		ug/L		103	80 - 121
Ethyl methacrylate	ND		50.0	58.6		ug/L		117	62 - 142
2-Hexanone	ND		50.0	54.5		ug/L		109	47 - 150
Isobutyl alcohol	ND		1250	1380		ug/L		110	48 - 150
Methacrylonitrile	ND		500	555		ug/L		111	54 - 149
Methyl bromide	ND	F2	50.0	52.9		ug/L		106	53 - 146
Methyl chloride	ND		50.0	45.0		ug/L		90	61 - 137
Methylene bromide	ND		50.0	55.5		ug/L		111	61 - 136
Methylene Chloride	ND		50.0	54.9		ug/L		110	80 - 120
Methyl Ethyl Ketone	ND		50.0	58.7		ug/L		117	58 - 143
Methyl iodide	ND		50.0	53.1		ug/L		106	69 - 124
Methyl methacrylate	ND		100	113		ug/L		113	56 - 150
4-Methyl-2-pentanone (MIBK)	ND		50.0	55.3		ug/L		111	53 - 150
Propionitrile	ND		500	568		ug/L		114	57 - 142
Styrene	ND		50.0	56.6		ug/L		113	44 - 150
1,1,1,2-Tetrachloroethane	ND		50.0	54.6		ug/L		109	80 - 120
1,1,2,2-Tetrachloroethane	ND		50.0	56.9		ug/L		114	60 - 150

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16445-G-1 MS
Matrix: Water
Analysis Batch: 241303

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	ND		50.0	50.5		ug/L		101	66 - 132
Toluene	ND		50.0	51.8		ug/L		104	75 - 134
trans-1,4-Dichloro-2-butene	ND		50.0	60.4		ug/L		121	55 - 146
trans-1,2-Dichloroethene	ND		50.0	52.0		ug/L		104	79 - 121
trans-1,3-Dichloropropene	ND		50.0	55.3		ug/L		111	68 - 143
1,1,1-Trichloroethane	ND		50.0	51.1		ug/L		102	74 - 123
1,1,2-Trichloroethane	ND		50.0	54.7		ug/L		109	70 - 134
Trichloroethene	ND		50.0	50.7		ug/L		101	63 - 120
Trichlorofluoromethane	ND		50.0	47.9		ug/L		96	53 - 150
1,2,3-Trichloropropane	ND		50.0	56.8		ug/L		114	62 - 137
Vinyl acetate	ND		50.0	62.5		ug/L		125	63 - 150
Vinyl chloride	ND		50.0	47.4		ug/L		95	54 - 140
Xylenes, Total	ND		100	105		ug/L		105	80 - 124

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*71 - 139*
Dibromofluoromethane (Surr)	*104*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*103*		*76 - 121*
Toluene-d8 (Surr)	*101*		*80 - 129*

Lab Sample ID: 160-16445-G-1 MSD
Matrix: Water
Analysis Batch: 241303

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		50.0	48.8		ug/L		98	52 - 138	4	20
Acetonitrile	ND		500	470		ug/L		94	57 - 140	4	20
Acrolein	ND		250	244		ug/L		98	40 - 150	4	20
Acrylonitrile	ND		500	546		ug/L		109	58 - 142	4	20
Allyl chloride	ND		50.0	51.4		ug/L		103	74 - 124	7	20
Benzene	ND		50.0	51.0		ug/L		102	80 - 120	6	20
Bromochloromethane	ND		50.0	51.1		ug/L		102	72 - 125	8	20
Bromodichloromethane	ND		50.0	52.7		ug/L		105	71 - 128	6	20
Bromoform	ND		50.0	56.9		ug/L		114	65 - 133	3	20
Carbon disulfide	ND		50.0	52.7		ug/L		105	69 - 139	5	20
Carbon tetrachloride	ND		50.0	48.2		ug/L		96	70 - 126	5	20
Chlorobenzene	ND		50.0	47.0		ug/L		94	80 - 120	10	20
Chloroethane	ND		50.0	46.1		ug/L		92	59 - 144	5	20
Chloroform	ND		50.0	52.2		ug/L		104	80 - 120	5	20
Chloroprene	ND		50.0	48.3		ug/L		97	77 - 121	4	20
cis-1,2-Dichloroethene	ND		50.0	50.5		ug/L		101	80 - 124	8	20
cis-1,3-Dichloropropene	ND		50.0	49.7		ug/L		99	67 - 130	10	20
Dibromochloromethane	ND		50.0	56.7		ug/L		113	68 - 133	1	20
1,2-Dibromo-3-Chloropropane	ND		50.0	60.9		ug/L		122	58 - 148	8	20
1,2-Dibromoethane (EDB)	ND		50.0	55.8		ug/L		112	65 - 138	8	20
1,2-Dichlorobenzene	ND		50.0	54.3		ug/L		109	80 - 124	2	20
1,3-Dichlorobenzene	ND		50.0	51.9		ug/L		104	80 - 120	0	20
1,4-Dichlorobenzene	ND		50.0	50.0		ug/L		100	80 - 120	2	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-16445-G-1 MSD
Matrix: Water
Analysis Batch: 241303

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dichlorodifluoromethane	ND		50.0	49.1		ug/L		98	65 - 140	7	20
1,1-Dichloroethane	ND		50.0	51.8		ug/L		104	80 - 120	6	20
1,2-Dichloroethane	ND		50.0	51.7		ug/L		103	56 - 136	6	20
1,1-Dichloroethene	ND		50.0	49.7		ug/L		99	66 - 137	6	20
1,2-Dichloropropane	ND		50.0	48.9		ug/L		98	80 - 123	11	20
1,3-Dichloropropane	ND		50.0	51.8		ug/L		104	70 - 136	6	20
2,2-Dichloropropane	ND		50.0	48.3		ug/L		97	54 - 148	3	20
1,1-Dichloropropene	ND		50.0	48.0		ug/L		96	80 - 121	7	20
Ethylbenzene	ND		50.0	46.7		ug/L		93	80 - 121	9	20
Ethyl methacrylate	ND		50.0	57.3		ug/L		115	62 - 142	2	20
2-Hexanone	ND		50.0	55.5		ug/L		111	47 - 150	2	20
Isobutyl alcohol	ND		1250	1280		ug/L		102	48 - 150	7	20
Methacrylonitrile	ND		500	519		ug/L		104	54 - 149	7	20
Methyl bromide	ND	F2	50.0	42.3	F2	ug/L		85	53 - 146	22	20
Methyl chloride	ND		50.0	42.9		ug/L		86	61 - 137	5	20
Methylene bromide	ND		50.0	50.7		ug/L		101	61 - 136	9	20
Methylene Chloride	ND		50.0	53.4		ug/L		107	80 - 120	3	20
Methyl Ethyl Ketone	ND		50.0	54.4		ug/L		109	58 - 143	8	20
Methyl iodide	ND		50.0	51.7		ug/L		103	69 - 124	3	20
Methyl methacrylate	ND		100	102		ug/L		102	56 - 150	11	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	53.3		ug/L		107	53 - 150	4	20
Propionitrile	ND		500	538		ug/L		108	57 - 142	5	20
Styrene	ND		50.0	54.2		ug/L		108	44 - 150	4	20
1,1,1,2-Tetrachloroethane	ND		50.0	55.8		ug/L		112	80 - 120	2	20
1,1,2,2-Tetrachloroethane	ND		50.0	55.2		ug/L		110	60 - 150	3	20
Tetrachloroethene	ND		50.0	47.0		ug/L		94	66 - 132	7	20
Toluene	ND		50.0	47.2		ug/L		94	75 - 134	9	20
trans-1,4-Dichloro-2-butene	ND		50.0	56.5		ug/L		113	55 - 146	7	20
trans-1,2-Dichloroethene	ND		50.0	49.2		ug/L		98	79 - 121	6	20
trans-1,3-Dichloropropene	ND		50.0	54.1		ug/L		108	68 - 143	2	20
1,1,1-Trichloroethane	ND		50.0	49.0		ug/L		98	74 - 123	4	20
1,1,2-Trichloroethane	ND		50.0	53.8		ug/L		108	70 - 134	2	20
Trichloroethene	ND		50.0	46.9		ug/L		94	63 - 120	8	20
Trichlorofluoromethane	ND		50.0	45.8		ug/L		92	53 - 150	4	20
1,2,3-Trichloropropane	ND		50.0	56.8		ug/L		114	62 - 137	0	20
Vinyl acetate	ND		50.0	54.8		ug/L		110	63 - 150	13	20
Vinyl chloride	ND		50.0	44.1		ug/L		88	54 - 140	7	20
Xylenes, Total	ND		100	99.5		ug/L		100	80 - 124	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*71 - 139*
Dibromofluoromethane (Surr)	*99*		*80 - 121*
1,2-Dichloroethane-d4 (Surr)	*97*		*76 - 121*
Toluene-d8 (Surr)	*93*		*80 - 129*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 160-240162/1-A
Matrix: Water
Analysis Batch: 241580

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240162

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Acenaphthylene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Acetophenone	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2-Acetylaminofluorene	ND		100	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
4-Aminobiphenyl	ND		50	1.1	ug/L		03/11/16 14:43	03/22/16 18:12	1
Anthracene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Benzo[a]anthracene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Benzo[a]pyrene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Benzo[b]fluoranthene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Benzo[g,h,i]perylene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Benzo[k]fluoranthene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Benzyl alcohol	ND		10	3.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Bis(2-chloroethoxy)methane	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Bis(2-chloroethyl)ether	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
bis(2 chloro-1-methylethyl) ether	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Bis(2-ethylhexyl) phthalate	ND		10	1.9	ug/L		03/11/16 14:43	03/22/16 18:12	1
4-Bromophenyl phenyl ether	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Butyl benzyl phthalate	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
4-Chloroaniline	ND		10	2.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Chlorobenzilate	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
4-Chloro-3-methylphenol	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2-Chloronaphthalene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2-Chlorophenol	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
4-Chlorophenyl phenyl ether	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Chrysene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Diallate	ND		20	2.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Dibenz(a,h)anthracene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Dibenzofuran	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
3,3'-Dichlorobenzidine	ND		50	1.3	ug/L		03/11/16 14:43	03/22/16 18:12	1
2,4-Dichlorophenol	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2,6-Dichlorophenol	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Diethyl phthalate	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Dimethoate	ND		20	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
7,12-Dimethylbenz(a)anthracene	ND		20	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
3,3'-Dimethylbenzidine	ND		50	2.6	ug/L		03/11/16 14:43	03/22/16 18:12	1
2,4-Dimethylphenol	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Dimethyl phthalate	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Di-n-butyl phthalate	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
1,3-Dinitrobenzene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
1,4-Dinitrobenzene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
4,6-Dinitro-2-methylphenol	ND		10	1.3	ug/L		03/11/16 14:43	03/22/16 18:12	1
2,4-Dinitrophenol	ND		50	2.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2,4-Dinitrotoluene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2,6-Dinitrotoluene	ND		10	2.2	ug/L		03/11/16 14:43	03/22/16 18:12	1
Di-n-octyl phthalate	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Dinoseb	ND		20	2.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Diphenylamine	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Disulfoton	ND		50	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-240162/1-A
Matrix: Water
Analysis Batch: 241580

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240162

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl methanesulfonate	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Famphur	ND		100	1.7	ug/L		03/11/16 14:43	03/22/16 18:12	1
Fluoranthene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Fluorene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Hexachlorobenzene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Hexachlorobutadiene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Hexachlorocyclopentadiene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Hexachloroethane	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Hexachlorophene	ND		250	10	ug/L		03/11/16 14:43	03/22/16 18:12	1
Hexachloropropene	ND		100	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Indeno[1,2,3-cd]pyrene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Isodrin	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Isophorone	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Isosafrole	ND		20	5.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Methapyrilene	ND		50	1.3	ug/L		03/11/16 14:43	03/22/16 18:12	1
3-Methylcholanthrene	ND		20	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Methyl methanesulfonate	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2-Methylnaphthalene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Methyl parathion	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2-Methylphenol	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
3 & 4 Methylphenol	ND		20	2.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Naphthalene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
1,4-Naphthoquinone	ND		50	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
1-Naphthylamine	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2-Naphthylamine	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2-Nitroaniline	ND		10	1.1	ug/L		03/11/16 14:43	03/22/16 18:12	1
3-Nitroaniline	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
4-Nitroaniline	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Nitrobenzene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
5-Nitro-o-toluidine	ND		20	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2-Nitrophenol	ND		10	1.5	ug/L		03/11/16 14:43	03/22/16 18:12	1
4-Nitrophenol	ND		10	2.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
N-Nitrosodiethylamine	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
N-Nitrosodimethylamine	ND		10	2.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
N-Nitrosodi-n-butylamine	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
N-Nitrosodi-n-propylamine	ND		10	1.5	ug/L		03/11/16 14:43	03/22/16 18:12	1
N-Nitrosomethylethylamine	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
N-Nitrosomorpholine	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
N-Nitrosopiperidine	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
N-Nitrosopyrrolidine	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
o,o',o''-Triethylphosphorothioate	ND		50	1.1	ug/L		03/11/16 14:43	03/22/16 18:12	1
o-Toluidine	ND		20	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Parathion	ND		50	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
p-Dimethylamino azobenzene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Pentachlorobenzene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Pentachloronitrobenzene	ND		50	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Pentachlorophenol	ND		50	1.3	ug/L		03/11/16 14:43	03/22/16 18:12	1
Phenacetin	ND		20	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 160-240162/1-A
Matrix: Water
Analysis Batch: 241580

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240162

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Phenol	ND		10	2.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Phorate	ND		50	2.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
p-Phenylene diamine	ND		100	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Pronamide	ND		20	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Pyrene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Safrole	ND		20	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2,3,4,6-Tetrachlorophenol	ND		50	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
Thionazin	ND		50	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
1,2,4-Trichlorobenzene	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2,4,5-Trichlorophenol	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
2,4,6-Trichlorophenol	ND		10	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1
1,3,5-Trinitrobenzene	ND		50	1.0	ug/L		03/11/16 14:43	03/22/16 18:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*67*		*43 - 108*	*03/11/16 14:43*	*03/22/16 18:12*	*1*
2-Fluorophenol (Surr)	*40*		*15 - 59*	*03/11/16 14:43*	*03/22/16 18:12*	*1*
Nitrobenzene-d5 (Surr)	*71*		*50 - 101*	*03/11/16 14:43*	*03/22/16 18:12*	*1*
Phenol-d5 (Surr)	*26*		*10 - 50*	*03/11/16 14:43*	*03/22/16 18:12*	*1*
Terphenyl-d14 (Surr)	*73*		*21 - 97*	*03/11/16 14:43*	*03/22/16 18:12*	*1*
2,4,6-Tribromophenol (Surr)	*69*		*37 - 120*	*03/11/16 14:43*	*03/22/16 18:12*	*1*

Lab Sample ID: LCS 160-240162/2-A
Matrix: Water
Analysis Batch: 241580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240162

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	200	140		ug/L		70	58 - 108
Acenaphthylene	200	133		ug/L		66	59 - 110
Anthracene	200	155		ug/L		78	59 - 106
Benzo[a]anthracene	200	161		ug/L		81	56 - 105
Benzo[a]pyrene	200	212		ug/L		106	54 - 109
Benzo[b]fluoranthene	200	235	*	ug/L		117	58 - 109
Benzo[g,h,i]perylene	200	199		ug/L		100	50 - 119
Benzo[k]fluoranthene	200	221	*	ug/L		111	54 - 109
Bis(2-chloroethoxy)methane	200	158		ug/L		79	59 - 110
Bis(2-chloroethyl)ether	200	151		ug/L		76	58 - 109
bis(2 chloro-1-methylethyl) ether	200	142		ug/L		71	49 - 97
Bis(2-ethylhexyl) phthalate	200	169		ug/L		84	58 - 111
4-Bromophenyl phenyl ether	200	156		ug/L		78	62 - 98
Butyl benzyl phthalate	200	166		ug/L		83	56 - 111
4-Chloroaniline	200	126		ug/L		63	43 - 97
4-Chloro-3-methylphenol	200	139		ug/L		69	51 - 102
2-Chloronaphthalene	200	133		ug/L		67	58 - 109
2-Chlorophenol	200	130		ug/L		65	47 - 97
4-Chlorophenyl phenyl ether	200	150		ug/L		75	59 - 110
Chrysene	200	165		ug/L		83	55 - 107

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 160-240162/2-A
Matrix: Water
Analysis Batch: 241580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240162

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibenz(a,h)anthracene	200	234		ug/L		117	52 - 118
Dibenzofuran	200	142		ug/L		71	57 - 106
3,3'-Dichlorobenzidine	200	136		ug/L		68	50 - 105
2,4-Dichlorophenol	200	145		ug/L		72	55 - 104
Diethyl phthalate	200	159		ug/L		80	58 - 113
2,4-Dimethylphenol	200	136		ug/L		68	53 - 99
Dimethyl phthalate	200	151		ug/L		75	60 - 114
Di-n-butyl phthalate	200	157		ug/L		79	60 - 105
4,6-Dinitro-2-methylphenol	200	148		ug/L		74	56 - 118
2,4-Dinitrophenol	200	74.4	*	ug/L		37	53 - 119
2,4-Dinitrotoluene	200	161		ug/L		80	57 - 117
2,6-Dinitrotoluene	200	155		ug/L		77	59 - 117
Di-n-octyl phthalate	200	179		ug/L		90	59 - 113
Diphenylamine	200	146		ug/L		73	58 - 102
Fluoranthene	200	153		ug/L		76	56 - 113
Fluorene	200	155		ug/L		77	61 - 113
Hexachlorobenzene	200	154		ug/L		77	57 - 113
Hexachlorobutadiene	200	125		ug/L		62	52 - 102
Hexachlorocyclopentadiene	200	59.4	*	ug/L		30	40 - 120
Hexachloroethane	200	123		ug/L		61	52 - 102
Indeno[1,2,3-cd]pyrene	200	217		ug/L		108	49 - 120
Isophorone	200	131		ug/L		66	56 - 101
2-Methylnaphthalene	200	128		ug/L		64	54 - 101
2-Methylphenol	200	114		ug/L		57	40 - 96
3 & 4 Methylphenol	200	113		ug/L		57	40 - 87
Naphthalene	200	135		ug/L		68	54 - 98
2-Nitroaniline	200	150		ug/L		75	57 - 120
3-Nitroaniline	200	150		ug/L		75	47 - 113
4-Nitroaniline	200	159		ug/L		79	51 - 119
Nitrobenzene	200	152		ug/L		76	59 - 110
2-Nitrophenol	200	154		ug/L		77	58 - 111
4-Nitrophenol	200	49.1		ug/L		25	20 - 47
N-Nitrosodi-n-propylamine	200	154		ug/L		77	59 - 115
Pentachlorophenol	200	116		ug/L		58	49 - 115
Phenanthrene	200	158		ug/L		79	59 - 110
Phenol	200	48.7		ug/L		24	20 - 69
Pyrene	200	157		ug/L		78	55 - 105
1,2,4-Trichlorobenzene	200	122		ug/L		61	56 - 100
2,4,5-Trichlorophenol	200	140		ug/L		70	56 - 113
2,4,6-Trichlorophenol	200	146		ug/L		73	47 - 116

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*63*		*43 - 108*
2-Fluorophenol (Surr)	*39*		*15 - 59*
Nitrobenzene-d5 (Surr)	*73*		*50 - 101*
Phenol-d5 (Surr)	*26*		*10 - 50*
Terphenyl-d14 (Surr)	*74*		*21 - 97*
2,4,6-Tribromophenol (Surr)	*84*		*37 - 120*

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Lab Sample ID: LCSD 160-240162/3-A
Matrix: Water
Analysis Batch: 241580

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240162

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	200	137		ug/L		69	58 - 108	2	20
Acenaphthylene	200	136		ug/L		68	59 - 110	2	20
Anthracene	200	150		ug/L		75	59 - 106	4	20
Benzo[a]anthracene	200	161		ug/L		81	56 - 105	0	20
Benzo[a]pyrene	200	211		ug/L		105	54 - 109	1	20
Benzo[b]fluoranthene	200	232	*	ug/L		116	58 - 109	1	20
Benzo[g,h,i]perylene	200	213		ug/L		106	50 - 119	6	20
Benzo[k]fluoranthene	200	218		ug/L		109	54 - 109	1	20
Bis(2-chloroethoxy)methane	200	157		ug/L		79	59 - 110	0	20
Bis(2-chloroethyl)ether	200	151		ug/L		75	58 - 109	0	20
bis(2 chloro-1-methylethyl) ether	200	143		ug/L		71	49 - 97	1	20
Bis(2-ethylhexyl) phthalate	200	169		ug/L		84	58 - 111	0	20
4-Bromophenyl phenyl ether	200	146		ug/L		73	62 - 98	7	20
Butyl benzyl phthalate	200	165		ug/L		82	56 - 111	1	20
4-Chloroaniline	200	125		ug/L		63	43 - 97	0	20
4-Chloro-3-methylphenol	200	140		ug/L		70	51 - 102	1	20
2-Chloronaphthalene	200	133		ug/L		66	58 - 109	0	20
2-Chlorophenol	200	130		ug/L		65	47 - 97	1	20
4-Chlorophenyl phenyl ether	200	147		ug/L		73	59 - 110	2	20
Chrysene	200	163		ug/L		81	55 - 107	1	20
Dibenz(a,h)anthracene	200	234		ug/L		117	52 - 118	0	20
Dibenzofuran	200	141		ug/L		71	57 - 106	0	20
3,3'-Dichlorobenzidine	200	137		ug/L		69	50 - 105	1	20
2,4-Dichlorophenol	200	147		ug/L		73	55 - 104	1	20
Diethyl phthalate	200	162		ug/L		81	58 - 113	2	20
2,4-Dimethylphenol	200	139		ug/L		69	53 - 99	2	20
Dimethyl phthalate	200	155		ug/L		77	60 - 114	3	20
Di-n-butyl phthalate	200	156		ug/L		78	60 - 105	1	20
4,6-Dinitro-2-methylphenol	200	145		ug/L		72	56 - 118	2	20
2,4-Dinitrophenol	200	77.8	*	ug/L		39	53 - 119	5	20
2,4-Dinitrotoluene	200	157		ug/L		79	57 - 117	2	20
2,6-Dinitrotoluene	200	158		ug/L		79	59 - 117	2	20
Di-n-octyl phthalate	200	180		ug/L		90	59 - 113	1	20
Diphenylamine	200	141		ug/L		70	58 - 102	4	20
Fluoranthene	200	154		ug/L		77	56 - 113	1	20
Fluorene	200	150		ug/L		75	61 - 113	3	20
Hexachlorobenzene	200	147		ug/L		73	57 - 113	5	20
Hexachlorobutadiene	200	126		ug/L		63	52 - 102	1	20
Hexachlorocyclopentadiene	200	62.6	*	ug/L		31	40 - 120	5	20
Hexachloroethane	200	123		ug/L		61	52 - 102	0	20
Indeno[1,2,3-cd]pyrene	200	227		ug/L		114	49 - 120	5	20
Isophorone	200	135		ug/L		67	56 - 101	2	20
2-Methylnaphthalene	200	134		ug/L		67	54 - 101	5	20
2-Methylphenol	200	113		ug/L		56	40 - 96	1	20
3 & 4 Methylphenol	200	112		ug/L		56	40 - 87	1	20
Naphthalene	200	135		ug/L		67	54 - 98	0	20
2-Nitroaniline	200	155		ug/L		78	57 - 120	3	20
3-Nitroaniline	200	149		ug/L		74	47 - 113	1	20
4-Nitroaniline	200	156		ug/L		78	51 - 119	2	20
Nitrobenzene	200	154		ug/L		77	59 - 110	1	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 160-240162/3-A
Matrix: Water
Analysis Batch: 241580

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240162

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Nitrophenol			200	154		ug/L		77	58 - 111	0	20
4-Nitrophenol			200	51.7		ug/L		26	20 - 47	5	20
N-Nitrosodi-n-propylamine			200	155		ug/L		77	59 - 115	1	20
Pentachlorophenol			200	114		ug/L		57	49 - 115	2	20
Phenanthrene			200	153		ug/L		77	59 - 110	3	20
Phenol			200	48.2		ug/L		24	20 - 69	1	20
Pyrene			200	161		ug/L		81	55 - 105	3	20
1,2,4-Trichlorobenzene			200	122		ug/L		61	56 - 100	0	20
2,4,5-Trichlorophenol			200	145		ug/L		72	56 - 113	4	20
2,4,6-Trichlorophenol			200	149		ug/L		75	47 - 116	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*68*		*43 - 108*
2-Fluorophenol (Surr)	*39*		*15 - 59*
Nitrobenzene-d5 (Surr)	*75*		*50 - 101*
Phenol-d5 (Surr)	*25*		*10 - 50*
Terphenyl-d14 (Surr)	*77*		*21 - 97*
2,4,6-Tribromophenol (Surr)	*80*		*37 - 120*

Lab Sample ID: 160-16418-M-3-A MS
Matrix: Water
Analysis Batch: 241580

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 240162

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		190	135		ug/L		71	63 - 103
Acenaphthylene	ND		190	131		ug/L		69	64 - 105
Anthracene	ND		190	152		ug/L		80	64 - 101
Benzo[a]anthracene	ND		190	150		ug/L		79	55 - 116
Benzo[a]pyrene	ND		190	191		ug/L		101	55 - 109
Benzo[b]fluoranthene	ND	*	190	210		ug/L		110	56 - 119
Benzo[g,h,i]perylene	ND		190	199		ug/L		105	40 - 127
Benzo[k]fluoranthene	ND	*	190	199		ug/L		105	54 - 110
Bis(2-chloroethoxy)methane	ND		190	156		ug/L		82	64 - 105
Bis(2-chloroethyl)ether	ND		190	153		ug/L		81	63 - 104
bis(2 chloro-1-methylethyl) ether	ND		190	135		ug/L		71	54 - 102
Bis(2-ethylhexyl) phthalate	ND		190	155		ug/L		82	53 - 125
4-Bromophenyl phenyl ether	ND		190	148		ug/L		78	64 - 108
Butyl benzyl phthalate	ND		190	154		ug/L		81	56 - 128
4-Chloroaniline	ND		190	125		ug/L		66	48 - 92
4-Chloro-3-methylphenol	ND		190	118		ug/L		62	51 - 105
2-Chloronaphthalene	ND		190	131		ug/L		69	63 - 104
2-Chlorophenol	ND		190	114		ug/L		60	52 - 92
4-Chlorophenyl phenyl ether	ND		190	142		ug/L		75	64 - 105
Chrysene	ND		190	154		ug/L		81	56 - 115
Dibenz(a,h)anthracene	ND		190	227		ug/L		119	44 - 128
Dibenzofuran	ND		190	136		ug/L		72	62 - 101
3,3'-Dichlorobenzidine	ND		190	137		ug/L		72	43 - 117
2,4-Dichlorophenol	ND		190	135		ug/L		71	60 - 99

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 160-16418-M-3-A MS
Matrix: Water
Analysis Batch: 241580

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 240162

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diethyl phthalate	ND		190	155		ug/L		82	63 - 108
2,4-Dimethylphenol	ND		190	115		ug/L		60	54 - 97
Dimethyl phthalate	ND		190	154		ug/L		81	65 - 109
Di-n-butyl phthalate	ND		190	148		ug/L		78	62 - 109
4,6-Dinitro-2-methylphenol	ND		190	125		ug/L		66	61 - 113
2,4-Dinitrophenol	ND	F2 *	190	51.9		ug/L		27	20 - 131
2,4-Dinitrotoluene	ND		190	157		ug/L		83	62 - 112
2,6-Dinitrotoluene	ND		190	156		ug/L		82	64 - 112
Di-n-octyl phthalate	ND		190	157		ug/L		83	54 - 128
Diphenylamine			190	146		ug/L			
Fluoranthene	ND		190	150		ug/L		79	61 - 108
Fluorene	ND		190	147		ug/L		77	66 - 108
Hexachlorobenzene	ND		190	145		ug/L		76	62 - 108
Hexachlorobutadiene	ND		190	116		ug/L		61	57 - 97
Hexachlorocyclopentadiene	ND	*	190	58.8		ug/L		31	16 - 115
Hexachloroethane	ND		190	119		ug/L		62	57 - 97
Indeno[1,2,3-cd]pyrene	ND		190	214		ug/L		113	42 - 131
Isophorone	ND		190	126		ug/L		67	48 - 106
2-Methylnaphthalene	ND		190	129		ug/L		68	64 - 99
2-Methylphenol	ND		190	83.8		ug/L		44	39 - 83
3 & 4 Methylphenol	ND		190	78.7		ug/L		41	39 - 82
Naphthalene	ND		190	133		ug/L		70	63 - 98
2-Nitroaniline	ND		190	140		ug/L		74	62 - 115
3-Nitroaniline	ND		190	145		ug/L		76	52 - 108
4-Nitroaniline	ND		190	154		ug/L		81	56 - 114
Nitrobenzene	ND		190	143		ug/L		75	64 - 105
2-Nitrophenol	ND		190	150		ug/L		79	64 - 106
4-Nitrophenol	ND	F1 F2	190	22.3	F1	ug/L		12	15 - 42
N-Nitrosodi-n-propylamine	ND		190	148		ug/L		78	64 - 110
Pentachlorophenol	ND		190	104		ug/L		55	54 - 110
Phenanthrene	ND		190	152		ug/L		80	64 - 105
Phenol	ND	F1	190	25.1	F1	ug/L		13	15 - 70
Pyrene	ND		190	155		ug/L		82	57 - 118
1,2,4-Trichlorobenzene	ND		190	119		ug/L		63	61 - 95
2,4,5-Trichlorophenol	ND		190	139		ug/L		73	61 - 108
2,4,6-Trichlorophenol	ND		190	145		ug/L		76	61 - 108

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*68*		*43 - 108*
2-Fluorophenol (Surr)	*24*		*15 - 59*
Nitrobenzene-d5 (Surr)	*74*		*50 - 101*
Phenol-d5 (Surr)	*14*		*10 - 50*
Terphenyl-d14 (Surr)	*73*		*21 - 97*
2,4,6-Tribromophenol (Surr)	*80*		*37 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 160-16418-P-3-A MSD
Matrix: Water
Analysis Batch: 241580

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 240162

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		188	145		ug/L		77	63 - 103	8	20
Acenaphthylene	ND		188	141		ug/L		75	64 - 105	8	20
Anthracene	ND		188	150		ug/L		80	64 - 101	1	20
Benzo[a]anthracene	ND		188	148		ug/L		79	55 - 116	1	20
Benzo[a]pyrene	ND		188	191		ug/L		101	55 - 109	0	20
Benzo[b]fluoranthene	ND	*	188	209		ug/L		111	56 - 119	0	20
Benzo[g,h,i]perylene	ND		188	176		ug/L		93	40 - 127	13	20
Benzo[k]fluoranthene	ND	*	188	199		ug/L		106	54 - 110	0	20
Bis(2-chloroethoxy)methane	ND		188	157		ug/L		83	64 - 105	1	20
Bis(2-chloroethyl)ether	ND		188	150		ug/L		79	63 - 104	2	20
bis(2 chloro-1-methylethyl) ether	ND		188	142		ug/L		75	54 - 102	5	20
Bis(2-ethylhexyl) phthalate	ND		188	152		ug/L		81	53 - 125	2	20
4-Bromophenyl phenyl ether	ND		188	150		ug/L		80	64 - 108	1	20
Butyl benzyl phthalate	ND		188	152		ug/L		81	56 - 128	1	20
4-Chloroaniline	ND		188	116		ug/L		62	48 - 92	7	20
4-Chloro-3-methylphenol	ND		188	121		ug/L		64	51 - 105	3	20
2-Chloronaphthalene	ND		188	139		ug/L		74	63 - 104	6	20
2-Chlorophenol	ND		188	108		ug/L		57	52 - 92	6	20
4-Chlorophenyl phenyl ether	ND		188	154		ug/L		82	64 - 105	8	20
Chrysene	ND		188	151		ug/L		80	56 - 115	2	20
Dibenz(a,h)anthracene	ND		188	206		ug/L		109	44 - 128	10	20
Dibenzofuran	ND		188	146		ug/L		78	62 - 101	7	20
3,3'-Dichlorobenzidine	ND		188	138		ug/L		73	43 - 117	1	20
2,4-Dichlorophenol	ND		188	135		ug/L		72	60 - 99	0	20
Diethyl phthalate	ND		188	161		ug/L		86	63 - 108	4	20
2,4-Dimethylphenol	ND		188	118		ug/L		63	54 - 97	3	20
Dimethyl phthalate	ND		188	159		ug/L		84	65 - 109	3	20
Di-n-butyl phthalate	ND		188	151		ug/L		80	62 - 109	2	20
4,6-Dinitro-2-methylphenol	ND		188	137		ug/L		73	61 - 113	10	20
2,4-Dinitrophenol	ND	F2 *	188	90.6	F2	ug/L		48	20 - 131	54	20
2,4-Dinitrotoluene	ND		188	163		ug/L		87	62 - 112	4	20
2,6-Dinitrotoluene	ND		188	160		ug/L		85	64 - 112	3	20
Di-n-octyl phthalate	ND		188	156		ug/L		83	54 - 128	1	20
Diphenylamine			188	148		ug/L					
Fluoranthene	ND		188	151		ug/L		80	61 - 108	1	20
Fluorene	ND		188	159		ug/L		84	66 - 108	8	20
Hexachlorobenzene	ND		188	143		ug/L		76	62 - 108	1	20
Hexachlorobutadiene	ND		188	120		ug/L		63	57 - 97	3	20
Hexachlorocyclopentadiene	ND	*	188	70.1		ug/L		37	16 - 115	18	20
Hexachloroethane	ND		188	120		ug/L		64	57 - 97	1	20
Indeno[1,2,3-cd]pyrene	ND		188	195		ug/L		103	42 - 131	10	20
Isophorone	ND		188	131		ug/L		69	48 - 106	3	20
2-Methylnaphthalene	ND		188	132		ug/L		70	64 - 99	2	20
2-Methylphenol	ND		188	79.2		ug/L		42	39 - 83	6	20
3 & 4 Methylphenol	ND		188	72.8		ug/L		39	39 - 82	8	20
Naphthalene	ND		188	138		ug/L		73	63 - 98	4	20
2-Nitroaniline	ND		188	152		ug/L		81	62 - 115	9	20
3-Nitroaniline	ND		188	142		ug/L		75	52 - 108	2	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 160-16418-P-3-A MSD
Matrix: Water
Analysis Batch: 241580

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 240162

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Nitroaniline	ND		188	159		ug/L		84	56 - 114	3	20
Nitrobenzene	ND		188	151		ug/L		80	64 - 105	6	20
2-Nitrophenol	ND		188	153		ug/L		81	64 - 106	2	20
4-Nitrophenol	ND	F1 F2	188	6.39	J F1 F2	ug/L		3	15 - 42	111	20
N-Nitrosodi-n-propylamine	ND		188	151		ug/L		80	64 - 110	2	20
Pentachlorophenol	ND		188	106		ug/L		56	54 - 110	2	20
Phenanthrene	ND		188	153		ug/L		81	64 - 105	1	20
Phenol	ND	F1	188	24.0	F1	ug/L		13	15 - 70	5	20
Pyrene	ND		188	151		ug/L		80	57 - 118	3	20
1,2,4-Trichlorobenzene	ND		188	121		ug/L		64	61 - 95	2	20
2,4,5-Trichlorophenol	ND		188	143		ug/L		76	61 - 108	3	20
2,4,6-Trichlorophenol	ND		188	149		ug/L		79	61 - 108	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*77*		*43 - 108*
2-Fluorophenol (Surr)	*24*		*15 - 59*
Nitrobenzene-d5 (Surr)	*80*		*50 - 101*
Phenol-d5 (Surr)	*13*		*10 - 50*
Terphenyl-d14 (Surr)	*70*		*21 - 97*
2,4,6-Tribromophenol (Surr)	*89*		*37 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RA

Lab Sample ID: MB 160-240162/1-A
Matrix: Water
Analysis Batch: 242481

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240162

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Kepone - RA	ND		100	20	ug/L		03/11/16 14:43	03/28/16 20:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr) - RA	*0*	*X*	*43 - 108*	*03/11/16 14:43*	*03/28/16 20:03*	*1*
2-Fluorophenol (Surr) - RA	*0*	*X*	*15 - 59*	*03/11/16 14:43*	*03/28/16 20:03*	*1*
Nitrobenzene-d5 (Surr) - RA	*0*	*X*	*50 - 101*	*03/11/16 14:43*	*03/28/16 20:03*	*1*
Phenol-d5 (Surr) - RA	*0*	*X*	*10 - 50*	*03/11/16 14:43*	*03/28/16 20:03*	*1*
Terphenyl-d14 (Surr) - RA	*0*	*X*	*21 - 97*	*03/11/16 14:43*	*03/28/16 20:03*	*1*
2,4,6-Tribromophenol (Surr) - RA	*0*	*X*	*37 - 120*	*03/11/16 14:43*	*03/28/16 20:03*	*1*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-242201/3
Matrix: Water
Analysis Batch: 242201

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.010	mg/L			03/25/16 12:49	1
Sulfate	ND		0.50	0.050	mg/L			03/25/16 12:49	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 160-242201/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.20	0.020	mg/L			03/25/16 12:49	1

Lab Sample ID: LCS 160-242201/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.00	0.963		mg/L		96	90 - 110
Sulfate	8.00	7.58		mg/L		95	90 - 110
Chloride	2.00	1.87		mg/L		93	90 - 110

Lab Sample ID: 160-16391-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	0.66		4.00	4.55		mg/L		97	90 - 110

Lab Sample ID: 160-16391-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	0.66		0.491	J F5	mg/L		30	20

Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 160-16391-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride - DL	2.2		40.0	44.4		mg/L		105	90 - 110

Lab Sample ID: 160-16391-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride - DL	2.2		2.23		mg/L		3	20

Method: 300.0 - Anions, Ion Chromatography - DL2

Lab Sample ID: 160-16391-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242201

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride - DL2	210		400	587		mg/L		94	90 - 110

Method: 300.0 - Anions, Ion Chromatography - DL2 (Continued)

Lab Sample ID: 160-16391-A-1 DU
Matrix: Water
Analysis Batch: 242201

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride - DL2	210			219		mg/L				3	20

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-240394/1-A
Matrix: Water
Analysis Batch: 243457

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240394

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10	3.7	ug/L		03/14/16 13:50	04/02/16 01:25	1
Barium	ND		50	2.1	ug/L		03/14/16 13:50	04/02/16 01:25	1
Beryllium	ND		5.0	0.28	ug/L		03/14/16 13:50	04/02/16 01:25	1
Boron	ND	^	50	7.2	ug/L		03/14/16 13:50	04/02/16 01:25	1
Cadmium	ND		5.0	0.34	ug/L		03/14/16 13:50	04/02/16 01:25	1
CaHard	61.9	J	1000	54	ug/L		03/14/16 13:50	04/02/16 01:25	1
Calcium	ND		1000	54	ug/L		03/14/16 13:50	04/02/16 01:25	1
Cobalt	ND		50	2.7	ug/L		03/14/16 13:50	04/02/16 01:25	1
Copper	ND		25	2.1	ug/L		03/14/16 13:50	04/02/16 01:25	1
Iron	187		100	13	ug/L		03/14/16 13:50	04/02/16 01:25	1
Lead	ND		10	0.60	ug/L		03/14/16 13:50	04/02/16 01:25	1
Magnesium	ND		1.0	0.051	mg/L		03/14/16 13:50	04/02/16 01:25	1
Manganese	ND		15	1.0	ug/L		03/14/16 13:50	04/02/16 01:25	1
MgHard	65.1	J	1000	51	ug/L		03/14/16 13:50	04/02/16 01:25	1
Nickel	ND		0.040	0.0026	mg/L		03/14/16 13:50	04/02/16 01:25	1
Phosphorus	19.1	J ^	250	14	ug/L		03/14/16 13:50	04/02/16 01:25	1
Selenium	ND		15	2.1	ug/L		03/14/16 13:50	04/02/16 01:25	1
Silver	ND		20	0.99	ug/L		03/14/16 13:50	04/02/16 01:25	1
Sodium	ND		1000	110	ug/L		03/14/16 13:50	04/02/16 01:25	1
Thallium	ND		20	2.4	ug/L		03/14/16 13:50	04/02/16 01:25	1
Total Hardness	ND		5000	1700	ug/L		03/14/16 13:50	04/02/16 01:25	1
Vanadium	ND		50	4.4	ug/L		03/14/16 13:50	04/02/16 01:25	1
Zinc	ND		20	8.3	ug/L		03/14/16 13:50	04/02/16 01:25	1

Lab Sample ID: MB 160-240394/1-A
Matrix: Water
Analysis Batch: 244889

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240394

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10	1.8	ug/L		03/14/16 13:50	04/06/16 18:12	1
Chromium	ND		10	3.4	ug/L		03/14/16 13:50	04/06/16 18:12	1

Lab Sample ID: LCS 160-240394/2-A
Matrix: Water
Analysis Batch: 243457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240394

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Antimony			500	521		ug/L		104	80 - 120		
Barium			1000	1020		ug/L		102	80 - 120		

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 160-240394/2-A
Matrix: Water
Analysis Batch: 243457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	1000	1010		ug/L		101	80 - 120
Boron	2000	2030	^	ug/L		101	80 - 120
Cadmium	1000	1040		ug/L		104	80 - 120
Calcium	10000	11500		ug/L		115	80 - 120
Cobalt	1000	1110		ug/L		111	80 - 120
Copper	1000	1060		ug/L		106	80 - 120
Iron	10000	10000		ug/L		100	80 - 120
Lead	1000	1070		ug/L		107	80 - 120
Magnesium	10.0	10.1		mg/L		101	80 - 120
Manganese	1000	1010		ug/L		101	80 - 120
Nickel	1.00	1.09		mg/L		109	80 - 120
Phosphorus	1000	1130	^	ug/L		113	80 - 120
Selenium	500	517		ug/L		103	80 - 120
Silver	200	207		ug/L		103	80 - 120
Sodium	10000	10100		ug/L		101	80 - 120
Thallium	200	222		ug/L		111	80 - 120
Vanadium	1000	1000		ug/L		100	80 - 120
Zinc	1000	1050		ug/L		105	80 - 120

Lab Sample ID: LCS 160-240394/2-A
Matrix: Water
Analysis Batch: 244889

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	928		ug/L		93	80 - 120
Chromium	1000	982		ug/L		98	80 - 120

Lab Sample ID: 160-16391-F-2-B MS ^5
Matrix: Water
Analysis Batch: 243457

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 240394

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		500	526		ug/L		105	75 - 125
Barium	76	J	1000	1100		ug/L		102	75 - 125
Beryllium	ND		1000	1020		ug/L		102	75 - 125
Boron	150	J ^	2000	2190	^	ug/L		102	75 - 125
Cadmium	ND		1000	1060		ug/L		106	75 - 125
Calcium	130000		10000	143000	4	ug/L		120	75 - 125
Cobalt	ND		1000	1100		ug/L		110	75 - 125
Copper	ND		1000	1080		ug/L		108	75 - 125
Iron	2000	B	10000	13300		ug/L		112	75 - 125
Lead	ND		1000	1080		ug/L		108	75 - 125
Magnesium	45		10.0	55.3	4	mg/L		108	75 - 125
Manganese	47	J	1000	1060		ug/L		101	75 - 125
Nickel	ND		1.00	1.10		mg/L		110	75 - 125
Phosphorus	ND	^	1000	1180	J ^	ug/L		118	75 - 125
Selenium	ND		500	529		ug/L		106	75 - 125
Silver	ND		200	205		ug/L		102	75 - 125
Sodium	21000		10000	31500		ug/L		106	75 - 125

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 160-16391-F-2-B MS ^5 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243457 — **Prep Batch: 240394**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	16	J	200	237		ug/L		110	75 - 125
Vanadium	ND		1000	1010		ug/L		101	75 - 125
Zinc	44	J	1000	1110		ug/L		107	75 - 125

Lab Sample ID: 160-16391-F-2-B MS ^5 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244889 — **Prep Batch: 240394**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1000	966		ug/L		97	75 - 125
Chromium	ND		1000	1010		ug/L		101	75 - 125

Lab Sample ID: 160-16391-F-2-C MSD ^5 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243457 — **Prep Batch: 240394**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		500	526		ug/L		105	75 - 125	0	20
Barium	76	J	1000	1090		ug/L		101	75 - 125	1	20
Beryllium	ND		1000	1010		ug/L		101	75 - 125	1	20
Boron	150	J ^	2000	2190	^	ug/L		102	75 - 125	0	20
Cadmium	ND		1000	1040		ug/L		104	75 - 125	2	20
Calcium	130000		10000	139000	4	ug/L		80	75 - 125	3	20
Cobalt	ND		1000	1090		ug/L		109	75 - 125	2	20
Copper	ND		1000	1050		ug/L		105	75 - 125	2	20
Iron	2000	B	10000	12800		ug/L		108	75 - 125	3	20
Lead	ND		1000	1060		ug/L		106	75 - 125	2	20
Magnesium	45		10.0	55.1	4	mg/L		105	75 - 125	0	20
Manganese	47	J	1000	1050		ug/L		100	75 - 125	0	20
Nickel	ND		1.00	1.08		mg/L		108	75 - 125	2	20
Phosphorus	ND	^	1000	1150	J ^	ug/L		115	75 - 125	2	20
Selenium	ND		500	520		ug/L		104	75 - 125	2	20
Silver	ND		200	212		ug/L		106	75 - 125	3	20
Sodium	21000		10000	30900		ug/L		99	75 - 125	2	20
Thallium	16	J	200	241		ug/L		112	75 - 125	2	20
Vanadium	ND		1000	1010		ug/L		101	75 - 125	0	20
Zinc	44	J	1000	1090		ug/L		105	75 - 125	2	20

Lab Sample ID: 160-16391-F-2-C MSD ^5 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 244889 — **Prep Batch: 240394**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1000	1010		ug/L		101	75 - 125	4	20
Chromium	ND		1000	1060		ug/L		106	75 - 125	5	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 160-244974/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 245332 — **Prep Batch: 244974**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		500	64	ug/L		04/08/16 12:39	04/11/16 12:44	1

Lab Sample ID: LCS 160-244974/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 245332 — **Prep Batch: 244974**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	50000	49700		ug/L		99	80 - 120

Lab Sample ID: 160-16405-5 MS — **Client Sample ID: LCS-6B**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 245332 — **Prep Batch: 244974**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	4100	J	50000	55600		ug/L		103	75 - 125

Lab Sample ID: 160-16405-5 MSD — **Client Sample ID: LCS-6B**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 245332 — **Prep Batch: 244974**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	4100	J	50000	56700		ug/L		105	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-241336/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		03/21/16 09:47	03/21/16 19:26	1

Lab Sample ID: LCS 160-241336/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.84		ug/L		97	80 - 120

Lab Sample ID: 160-16343-A-2-D MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		5.00	4.82		ug/L		96	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 160-16343-A-2-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 241433 — **Prep Batch: 241336**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		5.00	4.66		ug/L		93	80 - 120	3	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 160-239853/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239853

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		5.0	3.5	mg/L			03/10/16 09:11	1

Lab Sample ID: LCS 160-239853/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239853

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	500	500		mg/L		100	90 - 110

Lab Sample ID: 160-16405-1 DU — **Client Sample ID: PZ-212-SD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 239853

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	730		739		mg/L		1	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 280-319197/20 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 319197

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.10	0.022	mg/L			04/01/16 21:43	1

Lab Sample ID: LCS 280-319197/18 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 319197

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	2.50	2.51		mg/L		100	90 - 110

Lab Sample ID: LCSD 280-319197/19 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 319197

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	2.50	2.39		mg/L		96	90 - 110	5	10

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 160-16405-1 MS — **Client Sample ID: PZ-212-SD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 319197

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.088	J F1 F2	1.00	1.10		mg/L		102	90 - 110

Lab Sample ID: 160-16405-1 MSD — **Client Sample ID: PZ-212-SD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 319197

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	0.088	J F1 F2	1.00	0.944	F1 F2	mg/L		86	90 - 110	16	10

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-319275/23 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 319275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.10	0.019	mg/L			04/01/16 11:55	1

Lab Sample ID: LCS 280-319275/22 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 319275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	5.00	5.01		mg/L		100	90 - 110

Lab Sample ID: MRL 280-319275/21 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 319275

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.100	0.111		mg/L		111	50 - 150

Lab Sample ID: 160-16405-1 MS — **Client Sample ID: PZ-212-SD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 319275

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	ND		4.00	4.05		mg/L		101	90 - 110

Lab Sample ID: 160-16405-1 MSD — **Client Sample ID: PZ-212-SD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 319275

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	ND		4.00	3.96		mg/L		99	90 - 110	2	10

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Method: 410.4 - COD

Lab Sample ID: MB 160-240815/3-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240893 — **Prep Batch: 240815**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	6.5	mg/L		03/16/16 14:28	03/17/16 11:27	1

Lab Sample ID: LCS 160-240815/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240893 — **Prep Batch: 240815**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	50.0		mg/L		100	90 - 110

Lab Sample ID: 160-16405-1 MS — **Client Sample ID: PZ-212-SD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240893 — **Prep Batch: 240815**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	ND		50.0	53.0		mg/L		106	90 - 110

Lab Sample ID: 160-16405-1 DU — **Client Sample ID: PZ-212-SD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240893 — **Prep Batch: 240815**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chemical Oxygen Demand	ND		ND		mg/L		NC	20

Method: 415.1 - TOC

Lab Sample ID: MB 160-242129/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.72	mg/L			03/23/16 18:30	1

Lab Sample ID: LCS 160-242129/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.74		mg/L		97	90 - 110

Lab Sample ID: 160-16308-J-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	1.3		5.00	6.34		mg/L		100	76 - 120

Method: 415.1 - TOC (Continued)

Lab Sample ID: 160-16308-J-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 242129

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon	1.3			1.24		mg/L				7	20

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-239995/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243219 — **Prep Batch: 239995**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02214	U	0.144	0.144	1.00	0.268	pCi/L	03/10/16 16:34	04/01/16 20:29	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.7*		*40 - 110*	*03/10/16 16:34*	*04/01/16 20:29*	*1*

Lab Sample ID: LCS 160-239995/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243219 — **Prep Batch: 239995**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	14.45		1.55	1.00	0.178	pCi/L	129	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.3*		*40 - 110*

Lab Sample ID: 160-16399-A-16-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243358 — **Prep Batch: 239995**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226	0.108	U	44.5	51.01		5.17	1.00	0.415	pCi/L	115	75 - 138		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*105*		*40 - 110*

Lab Sample ID: 160-16399-A-16-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243358 — **Prep Batch: 239995**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	0.108	U	44.7	52.49		5.31	1.00	0.630	pCi/L	118	75 - 138	0.14	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Lab Sample ID: MB 160-240181/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243219 — **Prep Batch: 240181**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02054	U	0.0450	0.0450	1.00	0.0794	pCi/L	03/11/16 19:36	04/01/16 07:06	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.2*		*40 - 110*	*03/11/16 19:36*	*04/01/16 07:06*	*1*

Lab Sample ID: LCS 160-240181/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243219 — **Prep Batch: 240181**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	14.41		1.37	1.00	0.0527	pCi/L	129	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*99.4*		*40 - 110*

Lab Sample ID: LCSD 160-240181/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243219 — **Prep Batch: 240181**

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.2	14.31		1.36	1.00	0.0752	pCi/L	128	68 - 137	0.04	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*109*		*40 - 110*

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-239979/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240577 — **Prep Batch: 239979**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2213	U	0.207	0.208	1.00	0.334	pCi/L	03/10/16 13:33	03/15/16 11:55	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.2*		*40 - 110*	*03/10/16 13:33*	*03/15/16 11:55*	*1*
Y Carrier	*90.5*		*40 - 110*	*03/10/16 13:33*	*03/15/16 11:55*	*1*

Lab Sample ID: LCS 160-239979/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240577 — **Prep Batch: 239979**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			15.5	16.01		1.67	1.00	0.317	pCi/L	103	56 - 140		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	99.4		40 - 110
Y Carrier	90.1		40 - 110

Lab Sample ID: LCSD 160-239979/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 240577 — **Prep Batch: 239979**

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			15.5	15.17		1.58	1.00	0.282	pCi/L	98	56 - 140	0.26	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	109		40 - 110
Y Carrier	87.9		40 - 110

Lab Sample ID: MB 160-240185/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243219 — **Prep Batch: 240185**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5655		0.347	0.351	1.00	0.536	pCi/L	03/11/16 20:03	04/01/16 16:39	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110	03/11/16 20:03	04/01/16 16:39	1
Y Carrier	69.9		40 - 110	03/11/16 20:03	04/01/16 16:39	1

Lab Sample ID: LCS 160-240185/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243219 — **Prep Batch: 240185**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			15.4	20.26		2.13	1.00	0.466	pCi/L	132	56 - 140		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	98.3		40 - 110
Y Carrier	72.9		40 - 110

Lab Sample ID: 160-16399-A-16-E MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243219 — **Prep Batch: 240185**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228	0.614	U G	61.3	68.96		7.21	1.00	1.42	pCi/L	112	45 - 150		

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	105		40 - 110
Y Carrier	82.6		40 - 110

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 160-16399-A-16-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243219 — **Prep Batch: 240185**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.614	U G	61.6	69.72		7.31	1.00	1.61	pCi/L	113	45 - 150	0.05	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*
Y Carrier	*83.7*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-242738/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243016 — **Prep Batch: 242738**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	39.64	U	206	206	500	376	pCi/L	03/29/16 12:57	03/30/16 13:19	1

Lab Sample ID: LCS 160-242738/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243016 — **Prep Batch: 242738**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium			4660	4723		708	500	369	pCi/L	101	74 - 114		

Lab Sample ID: 440-141065-C-1-K MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243016 — **Prep Batch: 242738**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium	117	U	4650	4498		685	500	369	pCi/L	97	67 - 130		

Lab Sample ID: 440-141065-C-1-L MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 243016 — **Prep Batch: 242738**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Tritium	117	U	4650	4588		693	500	369	pCi/L	99	67 - 130	0.07	1

QC Sample Results

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Lab Sample ID: MB 160-241591/1-A
Matrix: Water
Analysis Batch: 242683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241591

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Thorium-230	0.2792		0.0957	0.0985	1.00	0.0520	pCi/L	03/22/16 13:44	03/29/16 11:07	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Thorium-229	*107*		*30 - 110*	*03/22/16 13:44*	*03/29/16 11:07*	*1*

Lab Sample ID: LCS 160-241591/2-A
Matrix: Water
Analysis Batch: 242685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241591

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Thorium-230			8.03	8.293		0.882	1.00	0.0709	pCi/L	103	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Thorium-229	*98.7*		*30 - 110*

Lab Sample ID: 160-16405-1 DU
Matrix: Water
Analysis Batch: 242687

Client Sample ID: PZ-212-SD
Prep Type: Total/NA
Prep Batch: 241591

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Thorium-230	0.0486	U		0.3158		0.132	1.00	0.115	pCi/L			0.98	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Thorium-229	*74.0*		*30 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-241595/1-A
Matrix: Water
Analysis Batch: 242671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241595

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.03593	U	0.0481	0.0482	1.00	0.0794	pCi/L	03/22/16 13:44	03/29/16 11:11	1
Uranium-235/236	0.003805	U	0.0375	0.0375	1.00	0.0920	pCi/L	03/22/16 13:44	03/29/16 11:11	1
Uranium-238	0.01755	U	0.0404	0.0404	1.00	0.0792	pCi/L	03/22/16 13:44	03/29/16 11:11	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*93.9*		*30 - 110*	*03/22/16 13:44*	*03/29/16 11:11*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-241595/2-A
Matrix: Water
Analysis Batch: 242672

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241595

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			12.7	13.20		1.33	1.00	0.0747	pCi/L	104	84 - 120		
Uranium-238			13.0	12.86		1.30	1.00	0.0814	pCi/L	99	83 - 121		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*84.4*		*30 - 110*

Lab Sample ID: 160-16405-1 DU
Matrix: Water
Analysis Batch: 242674

Client Sample ID: PZ-212-SD
Prep Type: Total/NA
Prep Batch: 241595

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Uranium-233/234	6.32			6.102		0.714	1.00	0.0972	pCi/L			0.15	1
Uranium-235/236	0.0655	U		0.1769		0.0990	1.00	0.0821	pCi/L			0.67	1
Uranium-238	3.87			3.118		0.444	1.00	0.131	pCi/L			0.79	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*89.6*		*30 - 110*

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

GC/MS VOA

Analysis Batch: 239988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-J-1 MS	Matrix Spike	Total/NA	Water	8260C	
160-16391-J-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
160-16405-1	PZ-212-SD	Total/NA	Water	8260C	
160-16405-2	PZ-212-SS	Total/NA	Water	8260C	
160-16405-3 - DL	MW-1204	Total/NA	Water	8260C	
160-16405-4	PZ-203-SS	Total/NA	Water	8260C	
160-16405-5	LCS-6B	Total/NA	Water	8260C	
160-16405-6	TRIP BLANK	Total/NA	Water	8260C	
LCS 160-239988/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-239988/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-239988/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 241303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-5 - DL	LCS-6B	Total/NA	Water	8260C	
160-16445-G-1 MS	Matrix Spike	Total/NA	Water	8260C	
160-16445-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 160-241303/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-241303/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-241303/6	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 240162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1 - RA	PZ-212-SD	Total/NA	Water	3510C	
160-16405-1	PZ-212-SD	Total/NA	Water	3510C	
160-16405-2 - RA	PZ-212-SS	Total/NA	Water	3510C	
160-16405-2	PZ-212-SS	Total/NA	Water	3510C	
160-16405-3 - RA	MW-1204	Total/NA	Water	3510C	
160-16405-3	MW-1204	Total/NA	Water	3510C	
160-16405-3 - DL	MW-1204	Total/NA	Water	3510C	
160-16405-4 - RA	PZ-203-SS	Total/NA	Water	3510C	
160-16405-4	PZ-203-SS	Total/NA	Water	3510C	
160-16405-5 - RA	LCS-6B	Total/NA	Water	3510C	
160-16405-5 - DL	LCS-6B	Total/NA	Water	3510C	
160-16405-5	LCS-6B	Total/NA	Water	3510C	
160-16418-M-3-A MS	Matrix Spike	Total/NA	Water	3510C	
160-16418-P-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	
LCS 160-240162/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 160-240162/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 160-240162/1-A	Method Blank	Total/NA	Water	3510C	
MB 160-240162/1-A - RA	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 241580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16418-M-3-A MS	Matrix Spike	Total/NA	Water	8270D	240162
160-16418-P-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	8270D	240162
LCS 160-240162/2-A	Lab Control Sample	Total/NA	Water	8270D	240162
LCSD 160-240162/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	240162

GC/MS Semi VOA (Continued)

Analysis Batch: 241580 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-240162/1-A	Method Blank	Total/NA	Water	8270D	240162

Analysis Batch: 242140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Total/NA	Water	8270D	240162
160-16405-2	PZ-212-SS	Total/NA	Water	8270D	240162
160-16405-3	MW-1204	Total/NA	Water	8270D	240162
160-16405-4	PZ-203-SS	Total/NA	Water	8270D	240162
160-16405-5	LCS-6B	Total/NA	Water	8270D	240162

Analysis Batch: 242481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-240162/1-A - RA	Method Blank	Total/NA	Water	8270D	240162

Analysis Batch: 244334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-3 - DL	MW-1204	Total/NA	Water	8270D	240162
160-16405-5 - DL	LCS-6B	Total/NA	Water	8270D	240162

Analysis Batch: 244337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1 - RA	PZ-212-SD	Total/NA	Water	8270D	240162
160-16405-2 - RA	PZ-212-SS	Total/NA	Water	8270D	240162
160-16405-3 - RA	MW-1204	Total/NA	Water	8270D	240162
160-16405-4 - RA	PZ-203-SS	Total/NA	Water	8270D	240162
160-16405-5 - RA	LCS-6B	Total/NA	Water	8270D	240162

HPLC/IC

Analysis Batch: 242201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-A-1 DU	Duplicate	Total/NA	Water	300.0	
160-16391-A-1 DU - DL	Duplicate	Total/NA	Water	300.0	
160-16391-A-1 DU - DL2	Duplicate	Total/NA	Water	300.0	
160-16391-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
160-16391-A-1 MS - DL	Matrix Spike	Total/NA	Water	300.0	
160-16391-A-1 MS - DL2	Matrix Spike	Total/NA	Water	300.0	
160-16405-1	PZ-212-SD	Total/NA	Water	300.0	
160-16405-1 - DL	PZ-212-SD	Total/NA	Water	300.0	
160-16405-1 - DL2	PZ-212-SD	Total/NA	Water	300.0	
160-16405-2	PZ-212-SS	Total/NA	Water	300.0	
160-16405-2 - DL	PZ-212-SS	Total/NA	Water	300.0	
160-16405-3 - DL	MW-1204	Total/NA	Water	300.0	
160-16405-3 - DL2	MW-1204	Total/NA	Water	300.0	
160-16405-4	PZ-203-SS	Total/NA	Water	300.0	
160-16405-4 - DL	PZ-203-SS	Total/NA	Water	300.0	
LCS 160-242201/4	Lab Control Sample	Total/NA	Water	300.0	
MB 160-242201/3	Method Blank	Total/NA	Water	300.0	

QC Association Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Metals

Prep Batch: 240394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-F-2-B MS ^5	Matrix Spike	Total/NA	Water	3010A	
160-16391-F-2-C MSD ^5	Matrix Spike Duplicate	Total/NA	Water	3010A	
160-16405-1	PZ-212-SD	Total/NA	Water	3010A	
160-16405-2	PZ-212-SS	Total/NA	Water	3010A	
160-16405-3	MW-1204	Total/NA	Water	3010A	
160-16405-4	PZ-203-SS	Total/NA	Water	3010A	
160-16405-5	LCS-6B	Total/NA	Water	3010A	
LCS 160-240394/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-240394/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 241336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16343-A-2-D MS	Matrix Spike	Total/NA	Water	7470A	
160-16343-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
160-16405-1	PZ-212-SD	Total/NA	Water	7470A	
160-16405-2	PZ-212-SS	Total/NA	Water	7470A	
160-16405-3	MW-1204	Total/NA	Water	7470A	
160-16405-4	PZ-203-SS	Total/NA	Water	7470A	
160-16405-5	LCS-6B	Total/NA	Water	7470A	
LCS 160-241336/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 160-241336/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 241433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16343-A-2-D MS	Matrix Spike	Total/NA	Water	7470A	241336
160-16343-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	241336
160-16405-1	PZ-212-SD	Total/NA	Water	7470A	241336
160-16405-2	PZ-212-SS	Total/NA	Water	7470A	241336
160-16405-3	MW-1204	Total/NA	Water	7470A	241336
160-16405-4	PZ-203-SS	Total/NA	Water	7470A	241336
160-16405-5	LCS-6B	Total/NA	Water	7470A	241336
LCS 160-241336/2-A	Lab Control Sample	Total/NA	Water	7470A	241336
MB 160-241336/1-A	Method Blank	Total/NA	Water	7470A	241336

Analysis Batch: 243457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-F-2-B MS ^5	Matrix Spike	Total/NA	Water	6010C	240394
160-16391-F-2-C MSD ^5	Matrix Spike Duplicate	Total/NA	Water	6010C	240394
160-16405-1	PZ-212-SD	Total/NA	Water	6010C	240394
160-16405-2	PZ-212-SS	Total/NA	Water	6010C	240394
160-16405-3	MW-1204	Total/NA	Water	6010C	240394
160-16405-4	PZ-203-SS	Total/NA	Water	6010C	240394
160-16405-5	LCS-6B	Total/NA	Water	6010C	240394
LCS 160-240394/2-A	Lab Control Sample	Total/NA	Water	6010C	240394
MB 160-240394/1-A	Method Blank	Total/NA	Water	6010C	240394

Analysis Batch: 244889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16391-F-2-B MS ^5	Matrix Spike	Total/NA	Water	6010C	240394
160-16391-F-2-C MSD ^5	Matrix Spike Duplicate	Total/NA	Water	6010C	240394
160-16405-1	PZ-212-SD	Total/NA	Water	6010C	240394

Metals (Continued)

Analysis Batch: 244889 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-2	PZ-212-SS	Total/NA	Water	6010C	240394
160-16405-3	MW-1204	Total/NA	Water	6010C	240394
160-16405-4	PZ-203-SS	Total/NA	Water	6010C	240394
160-16405-5	LCS-6B	Total/NA	Water	6010C	240394
LCS 160-240394/2-A	Lab Control Sample	Total/NA	Water	6010C	240394
MB 160-240394/1-A	Method Blank	Total/NA	Water	6010C	240394

Prep Batch: 244974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-5	LCS-6B	Total/NA	Water	3010A	
160-16405-5 MS	LCS-6B	Total/NA	Water	3010A	
160-16405-5 MSD	LCS-6B	Total/NA	Water	3010A	
LCS 160-244974/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-244974/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 245332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-5	LCS-6B	Total/NA	Water	6010C	244974
160-16405-5 MS	LCS-6B	Total/NA	Water	6010C	244974
160-16405-5 MSD	LCS-6B	Total/NA	Water	6010C	244974
LCS 160-244974/2-A	Lab Control Sample	Total/NA	Water	6010C	244974
MB 160-244974/1-A	Method Blank	Total/NA	Water	6010C	244974

General Chemistry

Analysis Batch: 239853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Total/NA	Water	160.1	
160-16405-1 DU	PZ-212-SD	Total/NA	Water	160.1	
160-16405-2	PZ-212-SS	Total/NA	Water	160.1	
160-16405-3 - DL	MW-1204	Total/NA	Water	160.1	
160-16405-4	PZ-203-SS	Total/NA	Water	160.1	
LCS 160-239853/2	Lab Control Sample	Total/NA	Water	160.1	
MB 160-239853/1	Method Blank	Total/NA	Water	160.1	

Prep Batch: 240815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Total/NA	Water	410.4	
160-16405-1 DU	PZ-212-SD	Total/NA	Water	410.4	
160-16405-1 MS	PZ-212-SD	Total/NA	Water	410.4	
160-16405-2	PZ-212-SS	Total/NA	Water	410.4	
160-16405-3 - DL	MW-1204	Total/NA	Water	410.4	
160-16405-4	PZ-203-SS	Total/NA	Water	410.4	
LCS 160-240815/4-A	Lab Control Sample	Total/NA	Water	410.4	
MB 160-240815/3-A	Method Blank	Total/NA	Water	410.4	

Analysis Batch: 240893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Total/NA	Water	410.4	240815
160-16405-1 DU	PZ-212-SD	Total/NA	Water	410.4	240815

General Chemistry (Continued)

Analysis Batch: 240893 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1 MS	PZ-212-SD	Total/NA	Water	410.4	240815
160-16405-2	PZ-212-SS	Total/NA	Water	410.4	240815
160-16405-3 - DL	MW-1204	Total/NA	Water	410.4	240815
160-16405-4	PZ-203-SS	Total/NA	Water	410.4	240815
LCS 160-240815/4-A	Lab Control Sample	Total/NA	Water	410.4	240815
MB 160-240815/3-A	Method Blank	Total/NA	Water	410.4	240815

Analysis Batch: 242129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16308-J-1 DU	Duplicate	Total/NA	Water	415.1	
160-16308-J-1 MS	Matrix Spike	Total/NA	Water	415.1	
160-16405-1	PZ-212-SD	Total/NA	Water	415.1	
160-16405-2	PZ-212-SS	Total/NA	Water	415.1	
160-16405-3 - DL	MW-1204	Total/NA	Water	415.1	
160-16405-4	PZ-203-SS	Total/NA	Water	415.1	
LCS 160-242129/5	Lab Control Sample	Total/NA	Water	415.1	
MB 160-242129/4	Method Blank	Total/NA	Water	415.1	

Analysis Batch: 319197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Total/NA	Water	350.1	
160-16405-1 MS	PZ-212-SD	Total/NA	Water	350.1	
160-16405-1 MSD	PZ-212-SD	Total/NA	Water	350.1	
160-16405-2	PZ-212-SS	Total/NA	Water	350.1	
160-16405-3	MW-1204	Total/NA	Water	350.1	
160-16405-4	PZ-203-SS	Total/NA	Water	350.1	
LCS 280-319197/18	Lab Control Sample	Total/NA	Water	350.1	
LCSD 280-319197/19	Lab Control Sample Dup	Total/NA	Water	350.1	
MB 280-319197/20	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 319275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Total/NA	Water	353.2	
160-16405-1 MS	PZ-212-SD	Total/NA	Water	353.2	
160-16405-1 MSD	PZ-212-SD	Total/NA	Water	353.2	
160-16405-2	PZ-212-SS	Total/NA	Water	353.2	
160-16405-3	MW-1204	Total/NA	Water	353.2	
160-16405-4	PZ-203-SS	Total/NA	Water	353.2	
LCS 280-319275/22	Lab Control Sample	Total/NA	Water	353.2	
MB 280-319275/23	Method Blank	Total/NA	Water	353.2	
MRL 280-319275/21	Lab Control Sample	Total/NA	Water	353.2	

Rad

Filtration Batch: 239855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Dissolved	Water	Filtration	
160-16405-2	PZ-212-SS	Dissolved	Water	Filtration	
160-16405-3	MW-1204	Dissolved	Water	Filtration	
160-16405-4	PZ-203-SS	Dissolved	Water	Filtration	

Rad (Continued)

Prep Batch: 239979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Dissolved	Water	PrecSep_0	239855
160-16405-2	PZ-212-SS	Dissolved	Water	PrecSep_0	239855
160-16405-3	MW-1204	Dissolved	Water	PrecSep_0	239855
160-16405-4	PZ-203-SS	Dissolved	Water	PrecSep_0	239855
LCS 160-239979/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-239979/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
MB 160-239979/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 239995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16399-A-16-B MS	Matrix Spike	Total/NA	Water	PrecSep-21	
160-16399-A-16-C MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	
160-16405-1	PZ-212-SD	Total/NA	Water	PrecSep-21	
160-16405-2	PZ-212-SS	Total/NA	Water	PrecSep-21	
160-16405-3	MW-1204	Total/NA	Water	PrecSep-21	
160-16405-4	PZ-203-SS	Total/NA	Water	PrecSep-21	
LCS 160-239995/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-239995/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 240181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Dissolved	Water	PrecSep-21	239855
160-16405-2	PZ-212-SS	Dissolved	Water	PrecSep-21	239855
160-16405-3	MW-1204	Dissolved	Water	PrecSep-21	239855
160-16405-4	PZ-203-SS	Dissolved	Water	PrecSep-21	239855
LCS 160-240181/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-240181/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
MB 160-240181/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 240185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16399-A-16-E MS	Matrix Spike	Total/NA	Water	PrecSep_0	
160-16399-A-16-F MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	
160-16405-1	PZ-212-SD	Total/NA	Water	PrecSep_0	
160-16405-2	PZ-212-SS	Total/NA	Water	PrecSep_0	
160-16405-3	MW-1204	Total/NA	Water	PrecSep_0	
160-16405-4	PZ-203-SS	Total/NA	Water	PrecSep_0	
LCS 160-240185/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-240185/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 241591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Total/NA	Water	ExtChrom	
160-16405-1 DU	PZ-212-SD	Total/NA	Water	ExtChrom	
160-16405-2	PZ-212-SS	Total/NA	Water	ExtChrom	
160-16405-3	MW-1204	Total/NA	Water	ExtChrom	
160-16405-4	PZ-203-SS	Total/NA	Water	ExtChrom	
LCS 160-241591/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
MB 160-241591/1-A	Method Blank	Total/NA	Water	ExtChrom	

Rad (Continued)

Prep Batch: 241595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Total/NA	Water	ExtChrom	
160-16405-1 DU	PZ-212-SD	Total/NA	Water	ExtChrom	
160-16405-2	PZ-212-SS	Total/NA	Water	ExtChrom	
160-16405-3	MW-1204	Total/NA	Water	ExtChrom	
160-16405-4	PZ-203-SS	Total/NA	Water	ExtChrom	
LCS 160-241595/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
MB 160-241595/1-A	Method Blank	Total/NA	Water	ExtChrom	

Prep Batch: 242738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16405-1	PZ-212-SD	Total/NA	Water	LSC_Dist_Susp	
160-16405-2	PZ-212-SS	Total/NA	Water	LSC_Dist_Susp	
160-16405-3	MW-1204	Total/NA	Water	LSC_Dist_Susp	
160-16405-4	PZ-203-SS	Total/NA	Water	LSC_Dist_Susp	
440-141065-C-1-K MS	Matrix Spike	Total/NA	Water	LSC_Dist_Susp	
440-141065-C-1-L MSD	Matrix Spike Duplicate	Total/NA	Water	LSC_Dist_Susp	
LCS 160-242738/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
MB 160-242738/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	

Surrogate Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	12DCE	TOL
Lab Sample ID	Client Sample ID	(71-139)	(80-121)	(76-121)	(80-129)
160-16391-J-1 MS	Matrix Spike	91	103	105	97
160-16391-J-1 MSD	Matrix Spike Duplicate	92	104	108	95
160-16405-1	PZ-212-SD	100	106	104	102
160-16405-2	PZ-212-SS	97	106	110	99
160-16405-3 - DL	MW-1204	96	102	108	94
160-16405-4	PZ-203-SS	99	103	106	101
160-16405-5	LCS-6B	101	107	107	101
160-16405-5 - DL	LCS-6B	96	99	97	98
160-16405-6	TRIP BLANK	97	101	102	100
160-16445-G-1 MS	Matrix Spike	101	104	103	101
160-16445-G-1 MSD	Matrix Spike Duplicate	100	99	97	93
LCS 160-239988/4	Lab Control Sample	91	101	99	97
LCS 160-241303/3	Lab Control Sample	92	100	96	103
LCSD 160-239988/5	Lab Control Sample Dup	93	99	98	97
LCSD 160-241303/4	Lab Control Sample Dup	91	97	96	93
MB 160-239988/7	Method Blank	97	100	97	98
MB 160-241303/6	Method Blank	96	98	98	95

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(43-108)	(15-59)	(50-101)	(10-50)	(21-97)	(37-120)
160-16405-1	PZ-212-SD	67	24	75	14	62	76
160-16405-2	PZ-212-SS	63	22	64	12	43	73
160-16405-3	MW-1204	50	29	50	0 X	23	55
160-16405-4	PZ-203-SS	64	24	70	13	53	76
160-16405-5	LCS-6B	27 X	22	32 X	22	14 X	33 X
160-16418-M-3-A MS	Matrix Spike	68	24	74	14	73	80
160-16418-P-3-A MSD	Matrix Spike Duplicate	77	24	80	13	70	89
LCS 160-240162/2-A	Lab Control Sample	63	39	73	26	74	84
LCSD 160-240162/3-A	Lab Control Sample Dup	68	39	75	25	77	80
MB 160-240162/1-A	Method Blank	67	40	71	26	73	69
MB 160-240162/1-A - RA	Method Blank	0 X	0 X	0 X	0 X	0 X	0 X

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Tracer/Carrier Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Ba (40-110)
160-16399-A-16-B MS	Matrix Spike	105
160-16399-A-16-C MSD	Matrix Spike Duplicate	102
160-16405-1	PZ-212-SD	93.2
160-16405-2	PZ-212-SS	86.3
160-16405-3	MW-1204	66.4
160-16405-4	PZ-203-SS	99.7
LCS 160-239995/2-A	Lab Control Sample	98.3
LCS 160-240181/2-A	Lab Control Sample	99.4
LCSD 160-240181/3-A	Lab Control Sample Dup	109
MB 160-239995/1-A	Method Blank	99.7
MB 160-240181/1-A	Method Blank	93.2

Percent Yield (Acceptance Limits)

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Dissolved**

Lab Sample ID	Client Sample ID	Ba (40-110)
160-16405-1	PZ-212-SD	92.3
160-16405-2	PZ-212-SS	93.4
160-16405-3	MW-1204	92.6
160-16405-4	PZ-203-SS	97.4

Percent Yield (Acceptance Limits)

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
160-16399-A-16-E MS	Matrix Spike	105	82.6
160-16399-A-16-F MSD	Matrix Spike Duplicate	102	83.7
160-16405-1	PZ-212-SD	93.2	80.4
160-16405-2	PZ-212-SS	86.3	81.5
160-16405-3	MW-1204	66.4	80.4
160-16405-4	PZ-203-SS	99.7	80.4
LCS 160-239979/2-A	Lab Control Sample	99.4	90.1
LCS 160-240185/2-A	Lab Control Sample	98.3	72.9
LCSD 160-239979/3-A	Lab Control Sample Dup	109	87.9
MB 160-239979/1-A	Method Blank	93.2	90.5
MB 160-240185/1-A	Method Blank	99.7	69.9

Percent Yield (Acceptance Limits)

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Tracer/Carrier Summary

Client: Missouri Attorney General's Office
Project/Site: Groundwater Samples

TestAmerica Job ID: 160-16405-1

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Dissolved**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
160-16405-1	PZ-212-SD	92.3	88.6
160-16405-2	PZ-212-SS	93.4	83.7
160-16405-3	MW-1204	92.6	86.4
160-16405-4	PZ-203-SS	97.4	87.9

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: A-01-R - Isotopic Thorium (Alpha Spectrometry)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Th-229 (30-110)
160-16405-1	PZ-212-SD	85.5
160-16405-1 DU	PZ-212-SD	74.0
160-16405-2	PZ-212-SS	91.1
160-16405-3	MW-1204	58.3
160-16405-4	PZ-203-SS	90.7
LCS 160-241591/2-A	Lab Control Sample	98.7
MB 160-241591/1-A	Method Blank	107

Tracer/Carrier Legend

Th-229 = Thorium-229

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-16405-1	PZ-212-SD	93.0
160-16405-1 DU	PZ-212-SD	89.6
160-16405-2	PZ-212-SS	91.3
160-16405-3	MW-1204	85.8
160-16405-4	PZ-203-SS	73.9
LCS 160-241595/2-A	Lab Control Sample	84.4
MB 160-241595/1-A	Method Blank	93.9

Tracer/Carrier Legend

U-232 = Uranium-232